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Dear Regulatory Team Members:

Please find enclosed the Addendum to *Parcels B and G Radiological Removal Action Completion Report, Hunters Point Naval Shipyard, San Francisco, California*. Technical review of the enclosed report has been completed by the Navy's Radiological Affairs Support Office.

This Addendum addresses a deviation from recommended survey protocols (specifically the alpha scan rate). It provides multiple lines of evidence to demonstrate that the Remedial Action Objectives (RAOs) for radiologically impacted soil and structures at both Parcels B and G are complete and that the buildings are acceptable for unrestricted release.

If you have any further concerns please respond no later than Friday, November 21, 2014. This date is important to ensure that the current conveyance schedule for Parcels B and G remain on schedule. If you have questions regarding the enclosed report, please contact Ms. Melanie Kito at (619) 532-2220, or Mr. Thomas Macchiarella at (619) 532-0987.

Sincerely,

ALAN K. LEE
Base Closure Manager
By direction of the Director

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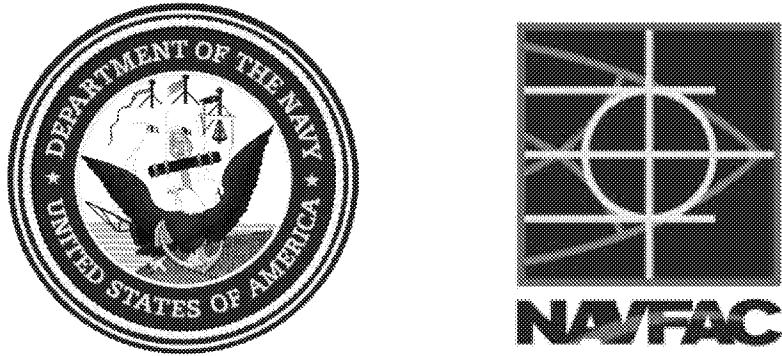
Enclosures: 1. Addendum to Parcels B and G Radiological Removal Action Completion Report, Hunters Point Naval Shipyard, San Francisco, California.

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**CONTRACT NO. N62473-10-D-0809
CTO No. 0002**

**ADDENDUM TO PARCELS B AND G
RADIOLOGICAL REMOVAL ACTION
COMPLETION REPORTS
November 2014**

DCN: RMAC-0809-0002-0112.A1

**ADDENDUM 1 TO:
DCN: ECSD-3211-0018-0179
AND
DCN: ECSD-3211-0018-0182**

**HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA**

**Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
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**CONTRACT NO. N62473-10-D-0809
CTO No. 0002**

**ADDENDUM TO PARCELS B AND G
RADIOLOGICAL REMOVAL ACTION
COMPLETION REPORTS**

November 2014

ADDENDUM 1 TO:

DCN: ECSD-3211-0018-0179

and

DCN: ECSD-3211-0018-0182

**HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA**

DCN: RMAC-0809-0002-0112.A1

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CERTIFICATION STATEMENT

I certify that this RACR Addendum memorializes the completion of radiological removal actions performed in Parcels B and G. The radiological removal actions were implemented pursuant to the AM (DON 2006). The DON subsequently prepared the Final Amended Parcel B Record of Decision (Amended ROD) (Navy 2009a) and the Final Record of Decision for Parcel G (Navy 2009b), which addressed radiological contaminants found in soil and structures. This radiological RACR Addendum documents the achievement of the implemented radiological removal action objective (RAO) identified in the Parcel B and Parcel G RODs. No additional construction activities for radiologically impacted soil and structures are anticipated at this time, thus the radiological alternative identified in each ROD is deemed complete.



11/04/2014

Mr. Alan K. Lee

Date

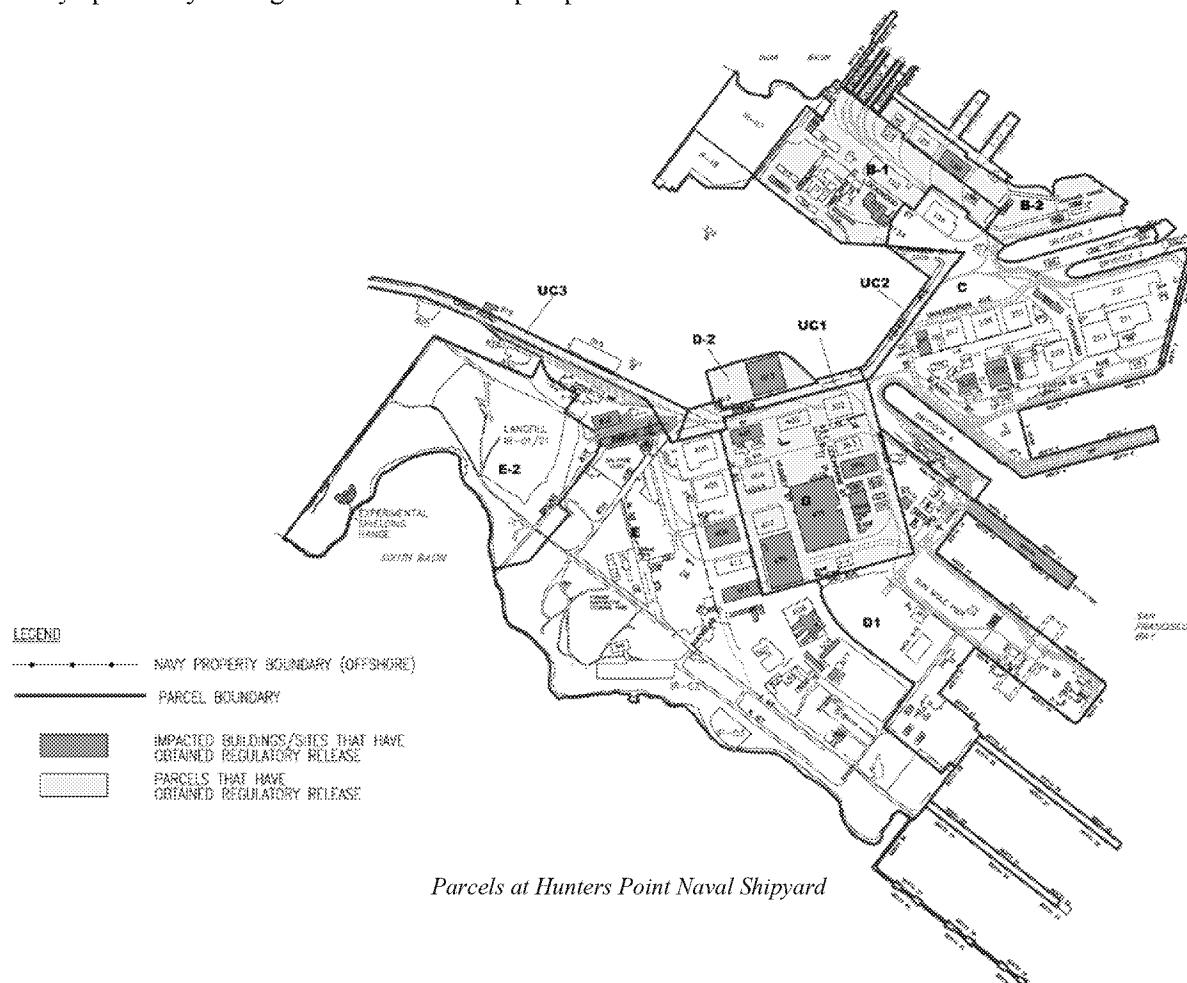
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EXECUTIVE SUMMARY

This addendum addresses potential radiological contamination in buildings located in Parcels B and G at Hunters Point Naval Shipyard (HPNS). The Addendum's purpose is to confirm the "radiological unrestricted release" status of these buildings, which the regulatory agencies documented in letters submitted to the Department of the Navy.

The buildings were previously surveyed to determine whether radioactivity was present and, if present, whether such radioactivity produced emissions at levels that were an unacceptable risk to human health. This Addendum provides multiple lines of evidence to demonstrate that the Remedial Action Objective (RAO) is complete and that the buildings are acceptable for unrestricted release. The Addendum also addresses questions about a deviation from recommended survey protocols (specifically the scanning rate) and whether the data obtained are still valid to support radiological unrestricted release.

At HPNS, the Historical Radiological Assessment (HRA) identified buildings located in Parcels B and G as being radiologically impacted (NAVSEA 2004). The original planning documents were written to obtain radiological unrestricted release for the buildings, former building sites, sanitary sewers, and storm drains. The primary radionuclide of concern is radium-226 (Ra-226) because of its common use in radioluminescent (i.e., glow in the dark) paint and long half-life of approximately 1,600 years. Ra-226 decays primarily through the emission of alpha particles.



The Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)—developed and approved by the Department of Defense, the U.S. Environmental Protection Agency, and the Nuclear Regulatory Commission in 2000—establishes procedures and formulas for evaluating radiological contamination (DoD et al. 2000). MARSSIM includes measures for statistically determining whether contamination is likely to be present within specific areas, referred to as survey units.

Three survey methods are used to detect radiological contamination on building surfaces: 1) systematic static (unmoving) measurements to test for fixed contamination, 2) wipe samples to test for removable surface contamination, and 3) scan surveys across a specified area encompassing the static measurement locations. These survey methods are performed iteratively during the MARSSIM survey process until a Final Status Survey is conducted to determine whether an individual survey unit has met the criteria for unrestricted radiological release.

For Parcels B and G buildings, the scan rate specified in the Task-Specific Plans (TSPs), which describe how surveys were to be completed, was not rigidly controlled to ensure the specified scan rate of 1.37 centimeters per second for alpha scans for the detection of Ra-226 was followed.

Multiple lines of evidence demonstrate that although the TSP-specified scan rate may not have always been achieved, the surveys were conducted at scan rates that were more than adequate to follow the MARSSIM survey process and document that the RAO of meeting the release criterion for Ra-226 has been achieved.

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ABBREVIATIONS AND ACRONYMS

AM	Action Memorandum
AEC	Atomic Energy Commission
ALARA	as low as reasonably achievable
Bi-210	bismuth-210
Bi-214	bismuth-214
CDPH	California Department of Public Health
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cm/s	centimeter per second
cm ²	square centimeter
cpm	counts per minute
Cs-137	cesium-137
DCGL	derived concentration guideline level
DON	Department of the Navy
dpm	disintegrations per minute
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
FSS	Final Status Survey
HPNS	Hunters Point Naval Shipyard
HRA	historical radiological assessment
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDC	minimum detectable concentration
mrem/y	millirem per year
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NRC	Nuclear Regulatory Commission
OSWER	Office of Solid Waste and Emergency Response
Pb-210	lead-210
Pb-214	lead-214
pCi/g	picocurie per gram
Po-210	polonium-210
Po-214	polonium-214
Po-218	polonium-218
Ra-226	radium-226

ABBREVIATIONS AND ACRONYMS

(Continued)

Rn-222	radon-222
RACR	Removal Action Completion Report
RASO	Radiological Affairs Support Office
RAO	Removal Action Objective
RCT	Radiological Control Technician`
ROC	radionuclide of concern
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986
Sr-90	strontium-90
TEDE	total effective dose equivalent
TSP	Task-Specific Plans
TtEC	Tetra Tech EC, Inc.

ADDENDUM TO PARCELS B AND G RADIOLOGICAL REMOVAL ACTION COMPLETION REPORTS

This Addendum addresses a deviation from various Task-Specific Plans (TSPs) and Final Status Survey (FSS) reports for buildings in Parcels B and G at Hunters Point Naval Shipyard (HPNS), specifically Buildings 103, 113, 113A, 130, 140, 146, 351, 351A, 366, 401, 411, and 439. The Parcel B Radiological Removal Action Completion Report (RACR) (TtEC 2012) and the Parcel G Radiological RACR (TtEC 2011) are separate documents; however, this RACR Addendum applies to both.

The deviation discussed herein involves alpha scan rates used to obtain radiological unrestricted release for these buildings. This Addendum presents evidence to confirm that:

- The techniques and methods used were acceptable to detect any alpha emitting contamination at or above the release criteria.
- No unacceptable risk to human health and the environment remains in Parcels B and G buildings.
- All radiological unrestricted release letters previously issued by the state remain applicable and valid for all Parcels B and G buildings.

1.0 REMOVAL AND REMEDIAL ACTION OBJECTIVES

Based on the radiological operational history described in the final HRA, Volume II (NAVSEA 2004), the Department of the Navy (DON) determined that low-level radioactive contamination was potentially present in some buildings, storm drain and sanitary sewer lines, soil, debris, and slag material at HPNS and required a response action. This decision was presented in the Final Base-wide Radiological Removal Action, Action Memorandum (AM) (DON 2006). The purpose of the AM was to document the DON's decision to perform time-critical removal actions at areas throughout HPNS that could contain localized radioactive contamination and substantially eliminate identified exposure pathways to surrounding populations and nearby ecosystems.

The DON identified the applicable or relevant and appropriate requirements (ARARs) for the HPNS removal actions, which were presented in Appendix A of the AM (DON 2006). The cleanup goals for localized radioactive contamination at HPNS presented in the AM were derived in consultation with federal and state regulators to meet the most conservative requirements at the time the AM was being written. The maximum radiological dose release criteria delineated in the AM was based on the Nuclear Regulatory Commission (NRC) dose limit of 25 millirem per year (mrem/y). However, the residual dose for the majority of the release criteria is well below that limit.

Currently, the DON reviews all surveys and remedial actions to ensure that residual radioactivity at HPNS meets the dose criterion of less than 15 mrem/y and the risk criterion of less than 3×10^{-4} when clearing radiologically impacted sites for unrestricted release. The radiological release criteria are identified in the AM. The HRA, Volume II (NAVSEA 2004), Parcel B Amended ROD and Parcel G

Record of Decision (ROD) (DON 2009) listed cesium-137 (Cs-137), radium-226 (Ra-226), and strontium-90 (Sr-90) as the radionuclides of concern (ROCs).

1.1 Parcel G

The final ROD for Parcel G (DON 2009) was signed on February 18, 2009. This document presented the selected remedy for Parcel G and addressed both chemical and radiological contamination. The final ROD was developed and the remedy selected in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by Superfund Amendments and Reauthorization Act of 1986 (SARA) and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The ARARs for Parcel G were provided as Attachment 1 to the ROD (DON 2009).

For Parcel G, the selected remedy was as follows:

- Decontaminate radiologically impacted structures and dismantle them if necessary. Excavate radiologically impacted storm drain and sanitary sewer lines and other areas, as necessary, throughout Parcel G. Survey buildings and former building sites. Screen removed materials and transport contaminated material off-site to an appropriate disposal facility.
- Obtain unrestricted closure or “free release” for all radiologically impacted areas and structures in Parcel G.

The RAO identified in the Parcel G ROD (DON 2009) for radiologically impacted sites was to prevent exposure to residual ROCs in concentrations that exceeded the release criteria for the ingestion or inhalation exposure pathways. The release criteria, identified in the AM (DON 2006) for HPNS (Table 2-1), were selected to achieve the RAO and were used to measure the success of the removal action. The Parcel G radiological remediation goals were identified in Table 5 of the ROD.

The radiological remedy selected in the Parcel G ROD (DON 2009) met the RAO by 1) identifying and decontaminating any radiologically impacted structures and 2) removing the source of contamination in soils by excavating the storm drain and sanitary sewer systems with proper off-site disposal of radiologically contaminated material. The RAO was achieved by performing radiological surveys of designated impacted buildings (Buildings 351, 351A, 366, 401, 408, 411, and 439) and former building sites (Buildings 317/364/365 Site) with documented radiological impacts for unrestricted release and removing potentially radiologically impacted storm drain and sanitary sewer systems and soils. As defined in the ROD (DON 2009), unrestricted radiological release means that Parcel G can be used for any residential or commercial purpose once regulatory requirements are met.

1.2 Parcel B

The remedy selected in the 1997 ROD required revision to be protective of human health and the environment in the long term, and the proposed amendments fundamentally altered its basic features including addressing radiological contaminants found in soil and structures on Parcel B. Subsequently, the Amended ROD (ChaduxTt 2009) was prepared to present the revised selected remedy to remediate soil, groundwater, and impacted structures on Parcel B. This document was developed and the revised remedy selected in accordance with CERCLA as amended by SARA and, to the extent practicable, the NCP.

For Parcel B, the selected remedy for radiologically impacted media was as follows:

- Decontaminate radiologically impacted structures and dismantle them if necessary. Excavate radiologically impacted storm drain and sanitary sewer lines and other areas, as necessary, throughout Parcel B. Survey buildings and former building sites. Screen removed materials and transport contaminated material off-site to an appropriate disposal facility.
- Obtain unrestricted closure or “free release” for all radiologically impacted areas and structures in Parcel B (except for the radiologically impacted portions of IR Site 07 and IR Site 18).

The Amended ROD (ChaduxTt 2009) identified the specific remediation goals for radiologically impacted sites on Parcel B. The RAO identified in the Amended ROD for Parcel B was to prevent exposure to residual ROCs in concentrations that exceeded the release criteria for the ingestion or inhalation exposure pathways. Release criteria, equivalent to the radiological release criteria identified in the AM (DON 2006), were selected to achieve the RAO and were used to measure the success of the removal action. The remediation goals for radiologically impacted soil, structures, and groundwater were listed in Table 8-4 of the Amended ROD. The RAO was achieved by performing radiological surveys of designated impacted buildings (Buildings 103, 113, 113A, 130, 140, and 146) with documented radiological impacts to obtain unrestricted release and removing potentially radiologically impacted storm drain and sanitary sewer systems and soils.

2.0 ALPHA SCAN SURVEYS FOR BUILDINGS

2.1 Objective

Although the scan speed of 1.37 centimeters per second (cm/s) to detect alpha emissions per the building-specific TSPs was not achieved, this Addendum confirms that the previous scanning techniques used are acceptable for detecting any possible contamination at or above the AM release criteria. Therefore, the RAO has been achieved and previous radiological unrestricted release letters for buildings in Parcels B and G are still valid.

This Addendum for Parcels B and G covers only the deviation for alpha scans on buildings. No known deviation occurred during the sanitary sewer and storm drain surveys.

2.2 Background

2.2.1 Radium-226 in Parcels B and G

At HPNS, buildings located in Parcels B and G (Figure 1) have been identified in the HRA as being radiologically impacted (NAVSEA 2004). The original planning documents were written to obtain radiological unrestricted release for the buildings, former building sites, sanitary sewers, and storm drains. The primary radionuclide of concern (ROC) is Ra-226 because of its common use in radioluminescent (i.e., glow in the dark) paint and long half-life of approximately 1,600 years. Ra-226 decays primarily through the emission of alpha particles. The mode of detection of radioactive decay is particularly challenging for a number of reasons, including the comparatively short range that alpha particles travel as well as the slow rate and random nature of decay.

2.2.2 Criteria and Guidance

The HPNS AM (DON 2006) lists the release criterion for Ra-226 at 100 disintegrations per minute (dpm)/100 square centimeters (cm^2). The actual size of 100 cm^2 (or approximately 4 inches by 4 inches) is shown on Figure 2. This release criterion is based on the 1974 Atomic Energy Commission (AEC) Regulatory Guide 1.86 (AEC 1974) values for the average contamination concentration detected across a square meter. The survey process to be used is as described in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), a manual developed and approved by the Department of Defense, the U.S. Environmental Protection Agency (EPA), the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC). MARSSIM contains various procedures and formulas for statistically determining whether contamination is likely to be present within areas referred to as survey units.

2.2.3 Survey Process

For radiological unrestricted release of building surfaces, the decision process is based on systematic static measurements for fixed contamination organized in a triangular grid pattern throughout the survey unit. Wipes for removable surface contamination are also collected at these locations. The results of these static measurements are compared statistically against those collected from a reference area (i.e., an area of similar materials that has not been radiologically impacted.) The DON has taken the conservative approach of ensuring that during the Final Status Survey (FSS), all static measurements collected within a survey unit are less than the release criteria, which ensures that a survey unit will “pass” a statistical analysis. Additionally, typically more than twice the required number of final systematic static measurements in each survey unit were collected. For instance, when using Section 5.5.2.2 of MARSSIM with the typical radionuclides of concern (Ra-226, Cs-137, and Sr-90) and typical backgrounds at HPNS, the calculated minimum number of static systematic measurements necessary is 9

from a survey unit and 9 from the reference area, for a total of 18. Typically, for building surveys, the DON requires a minimum of 20 static systematic measurements from the survey unit as well as an additional 20 from the reference area, for a total of 40.

2.2.4 Alpha Scan Surveys

Another part of the survey process is to conduct scan surveys in which a detector (usually a large area floor monitor detector such as a Ludlum Model 43-37 series gas flow proportional detector) is passed over the building surfaces at a calculated scan rate or slower, at a distance of less than $\frac{1}{4}$ inch from the surface. The purpose of the scan survey process is to ensure that no large areas of contamination exist between the systematic static measurements through the use of area factors as described in Section 5.5.2.4 of MARSSIM. Thus, the required scan rate is based on ensuring with a high degree of confidence that these areas of elevated concentration do not exist within the survey unit.

Alpha scanning is more complex than beta and gamma scan surveying. Instead of scanning with an understood minimum detectable concentration (MDC), alpha scanning detects radiation based on signal detection theory and the probability of detecting counts over a specified time interval. This process is based on statistical analyses, and places responsibility on an individual technician for performing follow-up steps in identifying and quantifying alpha contamination.

The DON has taken the very conservative approach of ensuring that no single area of 100 cm^2 within a survey unit exceeds 100 dpm of alpha contamination. Using MARSSIM calculations to ensure a 90 percent confidence level of identifying 100 dpm in a 100 cm^2 surface area resulted in an alpha scan rate guideline of 1.37 cm/s.

All radiologically impacted buildings in Parcel B and Parcel G have previously received radiological unrestricted release letters from the Department of Toxic Substances Control (DTSC) and California Department of Public Health (CDPH), based on review of the individual building FSS reports. These reports include all radiological survey data, including scan data, static measurements, and removable contamination analyses. The building TSP, which references the target maximum scan speed, is also included as an appendix to each FSS report.

2.2.5 Alpha Scan Rates

During a review of archived radiological scan data, the DON contractor Tetra Tech EC, Inc. (TtEC) discovered that the TSP-specified scan speed was not achieved in a number of building survey units. The majority of alpha scan surveys conducted using Ludlum Model 43-47 detectors achieved a rate of less than 4 cm/s.

The DON Radiological Affairs Support Office (RASO) collaborated with the CDPH in December 2013 to establish additional guidance regarding alpha scans by using AEC Regulatory Guide 1.86 (AEC 1974). The RASO Guidance Document for Conducting Alpha Scans for Radium of December 17, 2013 is

contained in Appendix C. This regulatory guide states that Ra-226 contamination is acceptable at an average concentration of 100 dpm/100 cm² across an entire square meter, and the maximum concentration at any location should not exceed 300 dpm/100 cm². RASO determined that the target maximum concentration for determining scan rate could be raised from 100 dpm/100 cm² to 300 dpm/100 cm², provided that the MARSSIM number of systematic static measurements is increased by the same factor, and that the probability of detection of 2 or more counts over an area exceeding the criterion is at least 68 percent.

In most cases, the MARSSIM calculated number of samples required is nine in the survey unit and nine in the reference area. In accordance with each building-specific TSP, TtEC collected a minimum of 20 systematic samples. To follow the RASO guidance, and to ensure no area exceeds 300 dpm/100 cm² at a 68 percent confidence level, the number of systematic samples necessary to be collected would be 27 instead of the typical 20 systematic samples TtEC collected in the past. Typically, this value can be achieved at an alpha scan rate of approximately 4 cm/s when using a large area 43-37 series detector. Using typical values at HPNS, the guidance allows the contractor to scan at a maximum of 5.1 cm/s for small area detectors, such as Ludlum Model 43-68 gas flow proportional detectors (1 to 3 counts per minute [cpm] background), and 4.51 cm/s for large area detectors, such as Ludlum Model 43-37 series gas flow proportional detectors (5 to 10 cpm background).

Twelve buildings had survey units that were scanned at estimated rates faster than 1.37 cm/s:

- 6 of 6 buildings in Parcel B
- 6 of 9 buildings in Parcel G

Appendix A provides scan rate data from TtEC's database, including estimated scan speeds.

The survey unit classifications are based on likelihood of potential contamination. Class 1 survey units possess the highest potential for contamination. Class 2 survey units are areas that border Class 1 survey units, usually on walls above a height of 2 meters. Class 3 survey units have a low likelihood of containing any contamination. Because Class 2 and 3 units are unlikely to contain areas of contamination, and as the adjacent or nearby Class 1 survey units surveyed within buildings at HPNS did not contain areas of contamination, the scan speeds in the Class 2 and Class 3 survey units are not as critical as those in Class 1 survey units.

3.0 DEMONSTRATION OF COMPLETION

TtEC reviewed all collected data from surveys conducted by TtEC at Parcels B and G buildings at HPNS. This data review was to evaluate whether the desired alpha scan rates of previous alpha scan surveys had been achieved and, if not, whether the overall survey process was effective in ensuring that the RAO had been achieved and the unrestricted radiological releases of the buildings were warranted.

The following sections present lines of evidence showing that the scan rates used for buildings in Parcels B and G were adequate to detect significant areas of contamination.

3.1 Elevated Beta Readings Serve as Secondary Measurement to Identify Contamination

Ra-226 can be assumed to be in secular equilibrium with its progeny (i.e., as the Ra-226 radioactively decays to form other radionuclides in its decay chain, these radionuclides are present in the same quantity as the Ra-226). These progeny (or “daughter” product) radionuclides also emit beta particles. Therefore, elevated beta contamination readings accompany Ra-226 contamination and can also be used as a secondary measurement to detect contamination. Beta scan measurements do not indicate large areas of contamination.

Based on previous experience with radiological surveys, if Ra-226 is a ROC, significant beta contamination is typically concurrent with actual Ra-226 contamination. The progeny from Ra-226 includes the beta emitters lead-214 (Pb-214), bismuth-214 (Bi-214), lead-210 (Pb-210), and bismuth-210 (Bi-210). Building 253 at HPNS was previously surveyed by TtEC under contract to the Navy, and contamination currently exists in the building. Actual locations contaminated with Ra-226 were isotopically identified with a SAM-940 in situ gamma spectroscopy isotope identifier. For example, some of the alpha/beta readings as identified by a Ludlum Model 2360 with a Ludlum 43-68 detector included:

- 4,086 dpm/cm² alpha with 40,724 dpm/cm² beta
- 959 dpm/100 cm² alpha with 11,244 dpm/100cm² beta
- 355 dpm/100 cm² alpha with 4,408 dpm/100 cm² beta

The Ludlum 2360 data logger used in conjunction with the Ludlum 43-37 series and 43-68 detectors collects the beta information simultaneously with the alpha contamination information. Therefore, in the event that alpha contamination may not have been “identified” during the alpha scan process, the corresponding beta contamination associated with the Ra-226 alpha contamination would have more than likely been identified.

Beta emitters, due to their more elevated count rate, are easier to statistically analyze and quantify with a scan MDC. In many cases such as the examples above, for “true” Ra-226 contamination, the ratio of beta contamination to alpha contamination is on the order of 10 to 1. It follows that anytime 1,000 dpm/100 cm² was exceeded, alpha and beta biased systematic measurements would have been collected, which would have also shown any Ra-226 at 100 dpm/100 cm². Due to this factor, it is highly unlikely that a significant area exceeding 100 dpm/100 cm² or 300 dpm/100 cm² of Ra-226 would have been present but not marked for further investigation. In almost all cases of building surveys at HPNS, Sr-90, with an investigation limit of 900 or 1,000 dpm/100 cm², was listed as an ROC.

3.2 Resultant Dose at Higher Scan Speed Less Than Regulatory Criteria

At HPNS, the fixed contamination release criterion depends on the ROC as listed in the HPNS AM, as based on the AEC Regulatory Guide 1.86 values for contamination averaged across 1 square meter.

- For alpha-emitting ROCs, the most common and restrictive radionuclide is Ra-226, with a release criterion of 100 dpm/100 cm².
- For beta-emitting ROCs, two major ROCs are cesium-137 (Cs-137) and Sr-90 with criteria of 5,000 dpm/100 cm² and 1,000 dpm/100 cm², respectively.

In all but three buildings (130, 411 and 439), Sr-90 was an ROC, resulting in the lower release criterion of 1,000 dpm/100 cm² as the most conservative beta contamination limit. This is because the detectors used for alpha and beta surveys cannot determine the radionuclide responsible for alpha or beta emissions.

During an alpha/beta scan survey, any location where a release criterion is believed to have been exceeded is investigated through collection of a 2-minute biased static to determine whether the scan measurement collected was representative of the area. Scan measurements, by design, are short-interval count time measurements of random radioactive decay events to determine whether further investigation is warranted. Static measurements collected for a longer count time provide statistically more accurate results, and can verify that elevated scan readings may be the result of random events occurring in rapid succession, or instrument error, such as from a detector cord crimp.

If a static measurement exceeds a release criterion, the area is further surveyed with a combination of scan and static measurements to demarcate the area of contamination. This area is subsequently remediated, and verification scan and static measurements are collected to confirm that the area has been remediated to less than all release criteria. The process is completed iteratively until all areas have been remediated to levels below all release criteria.

Release criteria equate to the following yearly doses when modeled in RESRAD-Build with 10 percent removable surface contamination over 100 m²:

- 100 dpm/100 cm² equates to an annual dose of 0.5 mrem/y
- 300 dpm/100 cm² equates to an annual dose of 1.43 mrem/y
- 1,000 dpm/100 cm² equates to an annual dose of 5 mrem/y
- 2,500 dpm/100 cm² equates to an annual dose of 12 mrem/y (latest EPA limit)
- 5,200 dpm/100 cm² equates to an annual dose of 25 mrem/y (NRC limit)

Several prominent guidelines from federal regulators offer perspective:

- The **NRC** specifies that a site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a total effective dose equivalent (TEDE) to an average member of the critical group that does not exceed 25 mrem/y, including that from groundwater sources of drinking water, and the residual radioactivity has

been reduced to levels that are as low as reasonably achievable (ALARA), per 10 *Code of Federal Regulations* 20.1402.

- The **EPA** specifies risk in the 10^{-4} to the 10^{-6} range. Per OSWER 9200.14 of August 22, 1997, the EPA correlates this risk to an approximate annual dose of 15 mrem/y. This limit has recently been changed to approximately 12 mrem/y per OSWER 9285.6-20 of June 13, 2014.

Although not directly pertinent to building surveys, as the release limit is related to soil, the HPNS Action Memorandum value of 1 picocurie per gram (pCi/g) above background for Ra-226 corresponds to an annual dose of approximately 17.1 mrem/y. By comparison, the RESRAD-Build software models the annual dose from Ra-226 at a concentration of 100 dpm/100 cm² across an entire 100 m² survey unit, 10 percent removable concentration, in secular equilibrium with its Pb-210 progeny, at approximately 0.5 mrem/y. This value is clearly at least an order of magnitude less than any documented release criterion based on dose.

Although a faster scan speed could have resulted in small areas between systematic measurement locations that exceeded 100 dpm/100 cm² Ra-226, the resultant dose is minimal, even if this possibly elevated level of contamination was assumed to be spread throughout an entire survey unit. For example, even if the scan rate was such that it would only detect 1,000 dpm/100 cm², and none of the 20 final 2-minute static systematic measurements detected this hypothetical concentration across an entire survey unit, the resultant dose would be 5 mrem/y. Note that 1,000 dpm/100 cm² is ten times the 100 dpm/100 cm² release criterion. Even though the likelihood of this occurrence is infinitesimally small, the resultant dose is a factor of 5 less than the NRC release criterion, and more than a factor of 2 less than the current EPA guidance.

3.3 Absence of Removable Surface Contamination Reflects Absence of Large Areas of Ra-226 Contamination

At every systematic and biased static measurement point, a removable surface contamination wipe was collected and analyzed on a Protean WPC 1050 gas proportional counter or Ludlum 2929 wipe counter with a 43-10-1 detector. The MDC is approximately 10 dpm for alpha and 20 dpm for beta for the count time used at HPNS. The FSS results indicated that no wipe analysis exceeded the MDC for either alpha or beta contamination. This is significant because conservative modeling in RESRAD-Build was based on 10 percent removable contamination, and, in essence, there is no removable contamination. For Ra-226, the removable contamination that can be inhaled and/or ingested makes up the majority of the RESRAD-Build modeled dose. Also, in cases with “actual” radium contamination, some proportion of the fixed contamination is “removable.” Therefore, the absence of removable contamination is further evidence that large areas of Ra-226 contamination do not exist at HPNS.

3.4 Evidence From Systematic Measurements Supports Evidence From Scan Measurements

MARSSIM provides a methodology for determining the minimum number of systematic measurements necessary to validate with confidence the Wilcoxon Rank-Sum statistical analysis. At HPNS, this value is typically calculated to be the minimum number of measurements (i.e., nine) for each survey unit. However, the DON has typically collected a minimum of 20 systematic static measurements (or more than twice the required number) in both the survey unit and the reference area. In addition, the DON has ensured that every survey unit has been remediated (if necessary) so that *every single systematic and biased static measurement and every removable surface contamination measurement are below the respective release criterion.*

This is significantly more conservative than MARSSIM allows, as the Wilcoxon Rank-Sum (WRS) statistical analysis is used to determine whether an individual survey unit meets the overall release criterion for an individual survey unit, while taking into account the random nature of radioactive decay. In fact, when using the WRS test, it is possible (and even probable) for multiple static systematic measurements to exceed the release criterion, and still have a survey unit “pass” the WRS test, indicating that the survey unit meets the release criterion.

As static measurements are collected for periods of 2 minutes, these values are more statistically precise than the scan measurements collected over periods of 4 to 12 seconds. The static measurements are the values upon which decisions of radiological unrestricted release are based. The purpose of the scan measurements is merely to ensure that large areas of contiguous contamination are not contained within areas between the systematic static measurements. The static measurement data are included as an attachment (typically Attachment C) in each FSS report.

3.5 Inclusion of Ra-226 Progeny Would Have Resulted in Higher Detector Efficiencies

Ra-226 is an alpha emitter and has been assigned a fixed contamination release criterion of 100 dpm/100 cm² per the HPNS Action Memorandum. Ra-226 also decays through a line of progeny (daughter products) that also decay through alpha decay, including radon-222 (Rn-222), polonium-218 (Po-218), polonium-214 (Po-214), and polonium-210 (Po-210). If the progeny are in secular equilibrium with Ra-226 (which is essentially achieved within 1 month), these alpha emitters will be in the same concentration as Ra-226. In other words, when 100 dpm/100 cm² of Ra-226 is present, there would also be present 100 dpm/100 cm² of Rn-222, of Po-218, and of Po-214. This would result in a total of 400 dpm/100 cm² of alpha contamination resulting from 100 dpm/100 cm² alpha contamination of Ra-226.

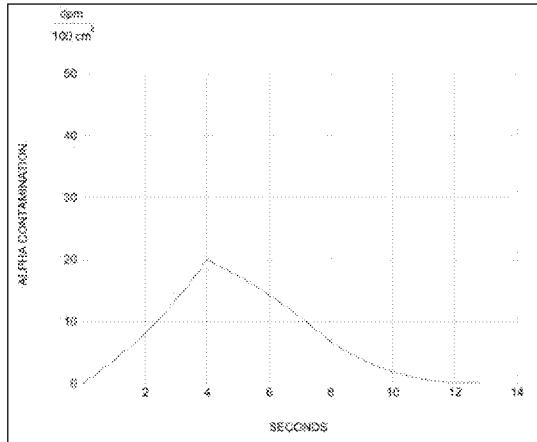
Because Rn-222 is a gas, some transfer of material can occur, and secular equilibrium may not be fully achieved. Experience has shown, however, that within buildings with low air flow, not much movement of the gas occurs, and although secular equilibrium may not be 100 percent achieved, it is significantly approached. Note that the Ludlum 2360 detector with 43-37 detector series (and all other alpha scanning equipment available) cannot distinguish between different types of alpha contamination (i.e., it cannot

distinguish whether alpha contamination is from Ra-226 or Po-218 – it merely registers as alpha contamination).

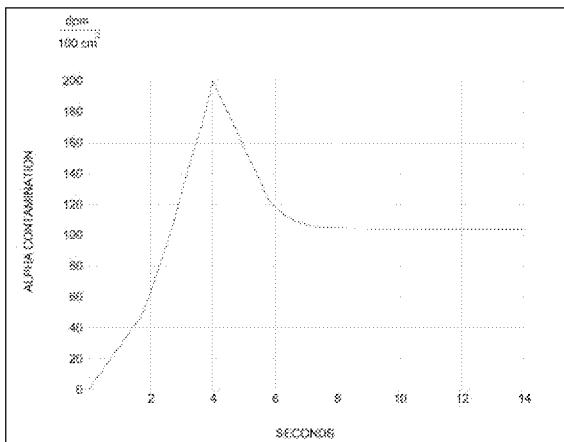
In other words, assuming secular equilibrium of Ra-226 with its progeny, a measurement reading of 100 dpm/100 cm² of alpha contamination would correspond to “actual” alpha contamination of 25 dpm/100 cm² of Ra-226 and 75 dpm/100 cm² of radium progeny.

3.6 Ratemeter Results Show Maximum Values Less Than 100 dpm/100 cm²

Previous HPNS surveys were conducted with the Ludlum 2360 datalogger in “ratemeter” mode. That is, the alpha and beta readings were logged in a “count rate” fashion, which averages counts over brief time periods in a “sliding window” manner. For instance, one alpha count rapidly increases the “count rate” from zero to a raw count rate and decreases to zero over an approximate 12-second period (if no other alpha counts are recorded by the Ludlum 2360 datalogger during that period). The first figure below shows an example of this typical change in countrate (after conversion to units of “dpm/100 cm²”) where no true contamination is present. If a large area of contiguous contamination is discovered, the count rate will “overshoot” and then “level off” at a count rate, essentially equivalent to the “true contamination” level. The second figure below shows an example of this.



Typical reading in ratemeter mode.



Reading of 100 dpm/100 cm² in ratemeter mode.

Note: The two tables above have different Alpha Contamination Scales

A close examination of the alpha scan data collected previously at HPNS shows that the alpha contamination values did not “ramp up” (which happens in “ratemeter” mode for “true contamination” as values are integrated and averaged continuously until the “true contamination” value is reached). In fact, the values are uniformly consistent and averaged around zero, as shown by the “average” and “standard deviation” columns shown for “Alpha DPM/100 cm²” in Appendix A. Also, the “maximum values” are all less than 100 dpm/100 cm² for all FSS reports. As a note, the “maximum values” listed in Appendix A are from all scan measurements, including areas that have been remediated previously, or have been found to be erroneously elevated readings, as verified by a further static measurement. Appendix A

includes an explanation for any maximum scan values that exceeded a release criterion during the scan survey process.

In short, since the ratemeter alpha and beta scan values do not show large variations in magnitude across entire survey units, it can be concluded that the statistically more precise systematic 2-minute static measurements from the survey unit are representative of the survey unit alpha concentration levels. All FSS systematic samples are less than 100 dpm/100 cm² (and usually less than the MDC); therefore, it is apparent that the previously surveyed survey units meet the criterion for unrestricted radiological release.

3.7 Empirical Study in Building 253 Shows Contamination Would be Detected at Higher Scan Speed

TtEC gathered empirical evidence to determine whether a Ludlum 43-37 series detector could detect areas of contamination smaller than the detector face of 821 cm² at actual contamination levels in the range of 100 dpm/100 cm² and 300 dpm/100 cm². On February 5, 2014, TtEC went to three separate, distinct previously identified areas of Ra-226 contamination within Building 253, which are known to be contaminated. These three areas had been identified using a SAM-940 In Situ Isotope Identifier as having Ra-226 contamination. Each of these areas (A, B, and C) was counted with 20 individual 1-minute alpha and beta static measurements to determine a separate, empirical mean alpha and beta contamination level.

The areas used for this study yielded the following results:

- Area A – 79 dpm/100 cm² alpha and 1,948 dpm/100 cm² beta
- Area B – 96 dpm/100 cm² alpha and 3,148 dpm/100 cm² beta
- Area C – 289 dpm/100 cm² alpha and 3,287 dpm/100 cm² beta

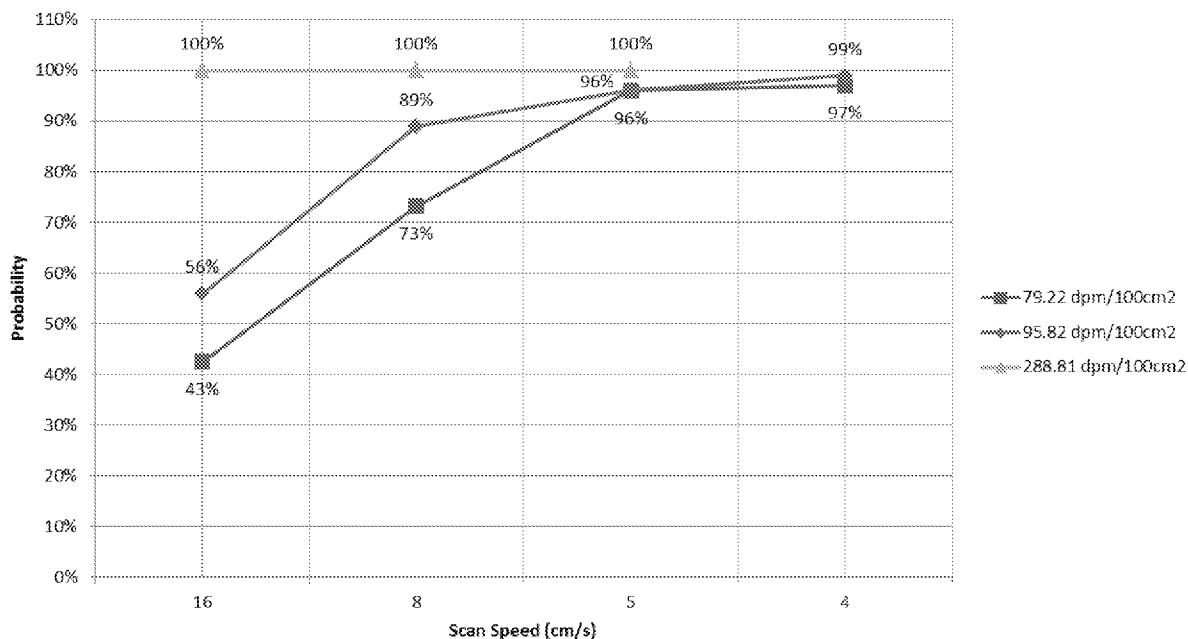
The Ludlum Model 2360 datalogger and 43-37 series detector were used to simulate an actual scan survey through a series of 100 measurements at different scan intervals, corresponding to different scan rates, to determine how often two or more counts were detected over the scan intervals.

The scan intervals corresponded to the alpha scan rates as follows, as the width of a 43-37 series detector is 15.9 cm (approximately 16 cm):

- 1-second scan interval – 16 cm/s scan rate
- 2-second scan interval – 8 cm/s scan rate
- 3-second scan interval – 5.3 cm/s scan rate
- 4-second scan interval – 4 cm/s scan rate

Every time two or more counts were registered over the time interval, that trial was listed as a “success.” As 100 “trials” were executed for each time interval, the number of trial “successes” was divided by 100 to determine an empirical probability of detection at Areas A, B and C. The following graph illustrates the results of the tests.

SCAN SPEED VS. PROBABILITY



The following table provides an analysis of the data.

Cleanup Criteria with Which the Alpha Readings Roughly Correlate	Actual Alpha Readings (dpm/100 cm ²)	Probability of Detecting Actual Alpha Readings	Scan Speed (cm/s)
20% Below AM Criterion--	79.22	43%	16
		73%	8
		96%	5
		97%	4
100 dpm/100 cm ² (from AM)	95.82	56%	16
		89%	8
		96%	5
		99%	4
300 dpm/100 cm ² (RASO Guidance)	288.81	100%	16
		100%	8
		100%	5
		100%	4

As the graph and table show, Area C, the 288.81 dpm/100 cm² contamination area (which is slightly less than the RASO guidance maximum value of 300 dpm/100 cm²), can be identified by the observation of 2 or more counts in 100 out of 100 of the trials (i.e., 100 percent of the time) even at scan rates of 16 cm/s (with a scan interval time of 1 second). Area B, the 95.82 dpm/100 cm² contamination area, can be

identified 89 percent of the time at 8 cm/s (with a scan time interval of 2 seconds) and 99 percent of the time at 4 cm/s (with a scan interval of 4 seconds). Both of these values compare favorably to the minimum detection probability of 68 percent in RASO guidance.

Most Class 1 survey units at HPNS showed estimated alpha scan rates in the range of 4 cm/s. Therefore, a high level of confidence is warranted that 100 dpm/100 cm² Ra-226 contamination would be detected, based on experimentation of actual Ra-226 contamination being detected with the actual equipment used to scan for alpha detection.

3.8 Worst Case Scenario

MARSSIM acknowledges that the concept of MDC, which is typical for quantifying effectiveness in radiation detection for static measurements and beta and gamma scan measurements, is not appropriate for alpha scan measurements. Instead, signal detection theory as described in Appendix J of MARSSIM must be used to estimate the probability of detecting alpha contamination.

The probability of detection for a large area detector is based on the following formula:

$$P(n \geq 2) = 1 - \left[1 + \frac{(GE + B)t}{60} \right] \left[e^{-\frac{(GE+B)t}{60}} \right]$$

where:

- | | | |
|----------|---|--|
| P(n ≥ 2) | = | probability of getting 2 or more counts during a time interval |
| t | = | time interval (seconds) |
| G | = | contamination activity (dpm) |
| E | = | detector efficiency (4 π) |
| B | = | observed background count rate (cpm) |

Using this formula, a rough approximation of a worst case scenario can be developed for the survey units with the fastest scan speeds in Parcels B and G for Class 1, 2, and 3 survey units. A calculated probability of approximately 90 percent indicates a high likelihood of alpha scans identifying an elevated contamination area, even when traveling at a comparatively rapid scan rate.

3.8.1 Worst Case Scenario for Survey Units with Fastest Scan Speeds

The following table shows the worst case scenarios in Class 1, 2, and 3 survey units in Parcels B and G. Parcel B buildings did not contain any Class 3 survey units, so no results can be provided. RESRAD-Build modeling results are presented in Appendix B.

Parcel	Building	Survey Unit	Survey Unit Classification	Scan Speed (cm/s)	Rounded Scan Speed (cm/s)	90% Probability Contamination (dpm/100 cm ²)	Surface Area (m ²)	Static Measurements	Area Between Static Measurements (m ²)	Dose ^a (mrem/y)	Dose Between Systematic Measurements ^b (mrem/y)
B	130	16	1	3.75	4	500	76.13	20	3.8	2.33	0.241
B	130	36	2	6.25	7	950	900.38	22	40.9	5.35	1.14
G	366	8	1	4.5	5	700	94.76	20	4.7	3.33	0.37
G	366	67	2	9.36	10	700	113	20	5.7	3.37	0.4
G	411	1	3	15.48	16	2,300	1,407.5	30	46.9	13.4	2.77

Notes:

^a The dose is based on modeling the entire surface area of the survey unit at the “90% probability contamination” level for Ra-226 in secular equilibrium with (i.e., at the same concentration as) Pb-210 as calculated using the MARSSIM formula from Appendix J. This model assumes a person is staying in the survey unit for 12 hours per day for 365 days a year.

^b The “Dose Between Systematic Measurements” is based on modeling the area between three adjacent static systematic measurement locations as demonstrated on MARSSIM page 5-38. This model assumes a person staying on the small area of concentration between systematic measurement locations for 12 hours per day for 365 days a year.

Abbreviations and Acronyms:

cm/s –centimeters per second

cm² – square centimeter

dpm – disintegrations per minute

m² – square meter

mrem/y – millirem per year

The fastest scan speed of 3.75 cm/s in Parcel B for a Class 1 survey unit occurred in Building 130, Survey Unit 16. To account for uncertainties, the actual scan speed is rounded up to 4 cm/s. To achieve a 90 percent probability of observing two or more counts at that scan speed using a typical background of 10 cpm and a 4π efficiency of 10 percent, the contamination level would be on the order of 500 dpm/100 cm². Building 130, Survey Unit 16, has a total surface area of 76.13 m², with no associated walls, and 20 static measurements were collected. RESRAD-Build software was used to model this level of contamination in secular equilibrium with Pb-210 across the entire room with 10 percent removable contamination. This results in a potential dose of 2.33 mrem/y. This level of contamination across the entire room would be readily identified through the static measurement process, so it is realistic to only consider the area between systematic points as being potentially contaminated at this level. The surface area divided by the number of static measurements results in $76.13 \text{ m}^2 / 20 = 3.8 \text{ m}^2$ of potentially contaminated area. This area of contamination results in a dose of 0.241 mrem/y.

As is apparent from the table, the modeled doses from hypothetical contamination between systematic measurements are extremely low, particularly in the Class 1 survey units, so much so that the annual dose is indistinguishable from background.

3.8.2 “Realistic” Worst Case Scenarios

Note that the previous examples are based on the assumption that the “worst case” scenario is predicated on the fastest scan rates alone. As different input parameters in RESRAD-Build contribute to different degrees in estimated dose, it is useful to develop a hypothetical “realistic worst case” scenario. This

extreme example under consideration is for a Class 1 survey unit, in which contamination is most likely to exist.

The largest allowable floor area for a Class 1 survey unit is 100 m². If this survey unit is within a 10-meter by 10-meter room with four walls, no doors, and no windows, and the walls are surveyed to a height of 2 meters, the surface area of the entire survey unit would be 180 m². With 20 systematic static measurements collected throughout the survey unit, the largest area between systematic measurement points is 9 m². If a 43-37-1 detector is moved at a rate of 16 cm/sec (which is decidedly faster than any scan estimate in a Class 1 survey unit for any Parcel B or G building surveys), the 90 percent probability of detection is approximately 2,230 dpm, assuming a 10 percent efficiency and 10 cpm background count rate. If this activity is modeled in RESRAD-Build for 9 m², the maximum resultant dose is estimated at 1.87 mrem/y.

3.8.3 Conclusion of Hypothetical Scenarios

As can be shown using both actual and hypothetical worst case scenarios with elevated scan rates, the resultant potential dose from maximum contamination concentrations between systematic static measurements is still significantly less than 5 mrem/y. Note also that no evidence indicates that any contamination at levels approaching those modeled in the hypothetical scenarios exists in any of the Parcel B or G buildings.

4.0 PREVIOUS TECHNIQUES VERSUS CURRENT TECHNIQUES AND IMPROVEMENTS

4.1 Previous Techniques

The original alpha scan survey process at HPNS consisted primarily of using a Ludlum model “floor cart” composed of a Ludlum 2360 datalogger connected to a Ludlum Model 43-37 gas flow proportional detector (with a 582 cm² surface area) or a Ludlum Model 43-37 series gas flow proportional detector (with a 821 cm² detector surface). The Ludlum 2360 datalogger was operated in “ratemeter” mode, which provides an average count rate in cpm. The cpm value is translated into units of dpm/100 cm² with the “background” count rate (based on reference area readings) subtracted. The reason for the selection of “ratemeter” mode was the comparative ease of data review by any regulatory agency or interested party.

While surveying with the “large area detector,” the Radiological Control Technician (RCT) was simultaneously listening for 2 or more “alpha counts” over a specified interval. If 2 or more counts occurred, the RCT paused over the area for an additional time interval and listened for 2 or more alpha counts again. If the phenomenon was repeated, the RCT marked the floor for a subsequent 2-minute alpha and beta static measurement, as well as a wipe survey for removable surface contamination. Note that beta contamination is collected and datalogged simultaneously during the alpha scan process. Although the alpha counts are heard audibly by the RCT at the time of the survey, in the “ratemeter”

mode, that information is not stored. The only information logged is an averaged count rate based on a “sliding window” of a series of microsecond data bits.

By contrast, in “scalar” mode, the actual number of alpha and beta counts over a specified interval is logged, with no averaging of adjacent data points. Scanning in “scalar” mode is more effective for identifying areas that need further investigation and provides an efficient way of quality control for the RCT performing the scan survey.

4.2 Current Techniques and Improvements

During preparations for alpha scan surveys at another job site, TtEC realized that the existing scan survey methodology made it difficult to perform quality control verifications of the data, as well as verify the scan rate. To address this, TtEC performed an in-depth analysis for all static, removable contamination and scan data accumulated during the surveys to determine the effectiveness of previous surveys. Appendix A provides alpha and beta scan survey data for all buildings surveyed by TtEC. These data were used to obtain an estimate of the scan speed in each survey unit based on the area of the survey unit in cm^2 , the scan interval in seconds, the length of the detector probe in centimeters, and the number of data points collected.

Scan speed formula is as follows:

$$\text{Scan speed} = \frac{\text{Scan Area} \times 10,000}{(\text{Probe length})(\text{Scan interval})(\text{Scan total})}$$

Where:

Scan Area	=	area of the floor surface surfaces in the survey unit in square meters
10,000	=	unit conversion from square meters to square centimeters
Probe Length	=	length in centimeters of the detector in the direction perpendicular to probe movement during scan surveys
Scan Interval	=	time interval in seconds that the instrument was collecting measurements
Scan Total	=	total number of measurements collected in the survey unit during the scan survey process

Note that for survey units in which multiple survey type instruments were used, the scan speed was estimated by including the product of the appropriate probe length, scan interval, and scan total measurements for each detector utilized for the survey, as a summation within the denominator. With the available data, the scan speed cannot be calculated with certainty because several other variables exist that cannot be confirmed. For instance, the RCT may have had to pause a number of times to verify 2 or more counts. As a result, some of the downloaded “counts” may have occurred without moving the detector. Also, when having to maneuver the cart to turn it around to survey another lane, the RCT may have stopped the detector movement. Additionally, some survey units may have included surface areas of walls up to 2 meters from the floor. The wall surface data are not included in TtEC’s database for total surface area from a survey unit.

In some survey units, more than one size detector (e.g., a 821 cm² 43-37-1 detector and a 126 cm² 43-68 detector) may have been used to scan the same survey unit, rendering it difficult to ascertain an exact scan speed. The scan speed spreadsheet lists a weighted average based on the number of measurement readings for each type of instrument for survey units in which different sized instruments were used during the surveys.

Beginning in August 2013, TtEC implemented improvements to the scan process. First, the Ludlum Model 2360 data-logging mode was changed to “scalar” so that the number of alpha counts over a specified time interval could be recorded directly from the Ludlum 2360 for quality assurance comparison with the actions taken by the RCTs based on the audible counts. Additionally, TtEC developed software such that whenever two or more counts are recorded over the specified time interval, the laptop screen used in conjunction with the floor cart will flash “yellow” with a “comments” message stating that a “pause” count is necessary. If two or more counts are repeated, the laptop screen flashes “red” with a corresponding “comments” section warning that a biased systematic measurement is required. These aids help to ensure that the RCT is taking proper actions in accordance with the TSP.

The RCTs have also been trained to collect scan measurements in a series of “rolling statics.” With this technique, the RCT moves the detector the width of the detector head, at the conclusion of each time interval, which is audible. This ensures that each potential area of contamination is covered by the detector for the required time interval, as opposed to moving the detector continuously with the hope that a continuous scan rate is maintained. It also allows for easily returning to an area that may have been identified by the Ludlum 2360 but not by the RCT. This is because each lane of the survey is identified in the data, as well as the detector width along the lane, usually by means of chalk markings along the floor and/or wall. Again, this technique is much easier than interpolating a location based on analysis of where an RCT may have placed the detector while moving at a constant scan rate.

5.0 CONCLUSION AND RECOMMENDATION

All previous radiological scanning meets the requirements to clearly demonstrate through multiple lines of evidence that the buildings in Parcels B and G achieve the release criteria, as published in the AM for HPNS, meet the RAOs set forth in the Parcel B and G RODs, and are safe for human health and the environment. With the evidence both collected and calculated, the DON is confident that the radiological unrestricted release letters for these parcels are still valid.

Abundant supporting evidence indicates that significant areas of contamination would have been identified even at substantially higher scan rates. The supporting evidence includes:

- 1) Elevated beta contamination readings (i.e., ~ 1,000 dpm/100 cm² or higher), which are easier to detect, would typically accompany Ra-226 alpha contamination. Such elevated beta measurements were not observed.

- 2) Although a faster scan speed could have resulted in failure to identify small areas that exceeded 100 dpm/100 cm² of Ra-226, the hypothetical resultant dose is indistinguishable from background, even if the contamination is modeled as though spread throughout an entire survey unit. Note that the modeling is based on a hypothetical worst case scenario, and absolutely no evidence exists that such a scenario has been approached.
- 3) No removable surface contamination was detected at levels above the minimum detectable concentration of 10 dpm/100 cm².
- 4) More than 90 percent of the systematic static measurements, each conducted over a 2-minute period, indicate less than 20 dpm/100 cm².
- 5) Although the DON does not account for Ra-226 progeny in its application of the HPNS AM release criterion, the alpha emitting Ra-226 progeny would contribute to much higher readings than were recorded. That is, a reading of 100 dpm/100 cm² of alpha contamination would likely correspond to approximately 25 dpm/100 cm² of Ra-226 with the remaining 75 dpm/100 cm² due to alpha radiation from the progeny.
- 6) All ratemeter mode scan readings from the FSSs showed maximum values less than 100 dpm/100 cm² (and usually less than 10 dpm/100 cm²).
- 7) Empirical measurements from a separate in situ field study indicate that 100 dpm/100 cm² of Ra-226 can be detected at a scan rate of up to 8 cm/s. Almost all of the previous scans were conducted at a rate below 4 cm/s. It is highly unlikely that the estimated scan rate is incorrect by a factor of greater than 2.
- 8) Worst case (hypothetical) scenarios were modeled using an extremely conservative estimated scan rate for a Class 1 survey unit, i.e., an area with the highest probability of contamination. Note that no activity that elevated was ever recorded. Based on these models, the maximum estimated dose is less than 5 mrem/y.

For these reasons, the DON concludes that the previously submitted data for building surveys at HPNS are more than adequate in demonstrating completion of the RAO and confirming that alpha contamination levels in the buildings are protective of human health and the environment. The previous techniques and methods used were acceptable for detecting any alpha emitting contamination at or above the release criteria provided in the AM. No further action is recommended to maintain the radiological unrestricted release status of these buildings.

6.0 REFERENCES

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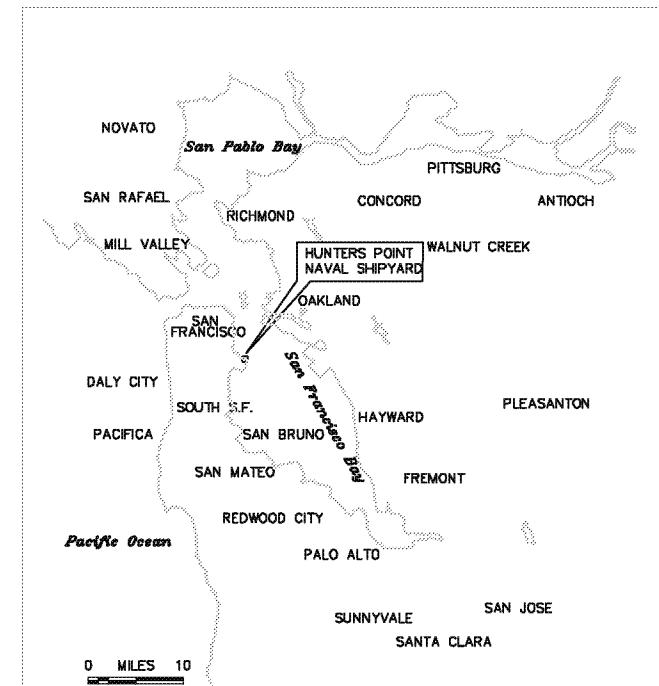
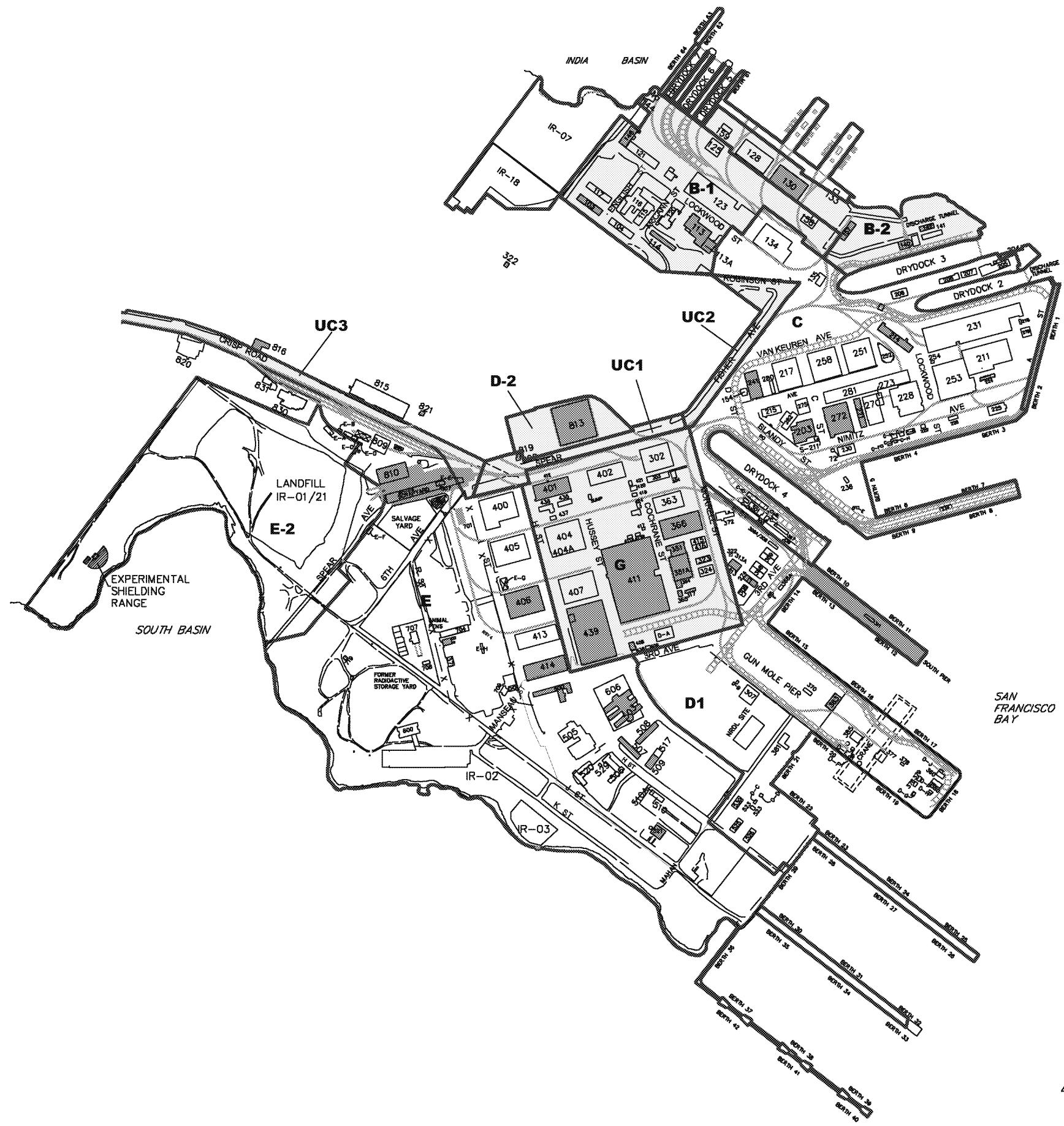
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FIGURES

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LEGEND

- NAVY PROPERTY BOUNDARY (OFFSHORE)
- PARCEL BOUNDARY
- IMPACTED BUILDINGS/SITES THAT HAVE OBTAINED REGULATORY RELEASE
- PARCELS THAT HAVE OBTAINED REGULATORY RELEASE

NOTES:

IMPACTED SITES ARE SITES THAT HAVE KNOWN RADIOPHYSICAL CONTAMINATION OR WHERE SITE HISTORY INDICATES THAT RADIOPHYSICAL CONTAMINATION MAY BE PRESENT.

FOR PLANNING PURPOSES, ALL SANITARY SEWERS & STORM DRAINS SHOULD BE CONSIDERED IMPACTED.

SANITARY SEWER AND STORM DRAIN LINE LOCATIONS BASED ON DATA FROM HPNS CSO (1995) AND THE FINAL HRA (AUG 2004) THAT HAVE NOT BEEN FIELD CHECKED.

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

FIGURE 1

RADIOLOGICAL STATUS

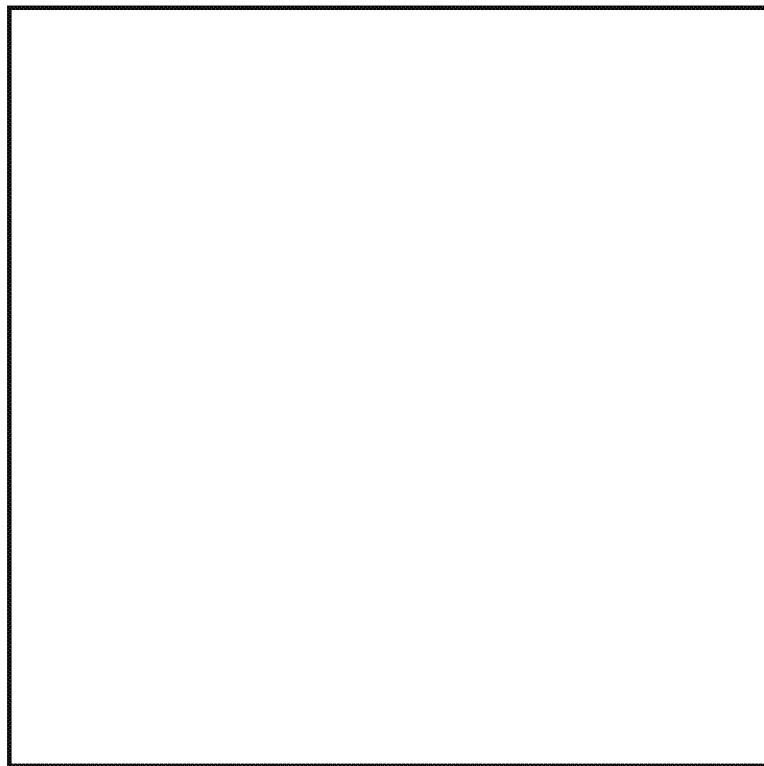
HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CA

REVISION:
AUTHOR: A. CRABTREE
PROJECT NO:
FILE: SEE BELOW



TETRA TECH EC, INC.

400 0 400 800
(feet)



1 0 1 2
(Centimeters)

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

FIGURE 2

100 SQUARE CENTIMETERS - ACTUAL SIZE

HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CA.

REVISION: B
AUTHOR: A. CRABTREE
PROJECT NO:
FILE: SEE BELOW



TETRA TECH EC, INC.

APPENDIX A
SCAN RATE TABLE

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Alpha Scan Speeds of buildings with free-release status at Hunters Point Naval Shipyard

Parcel	Building	HRA Contamination Potential	Survey Unit	Area (m ²)	Class	Scan Area ¹ (m ²)	Static Total	Scan Probe Model Type	Probe Length (cm)	Scan Total ²	Scan Interval (s)	Approx. Speed ³ (cm/s)	Alpha DPM/100 cm ²				Beta DPM/100 cm ²			
													Min	Average	Max	Standard Dev	Min	Average	Max	Standard Dev
HRA info: Building 103, Submarine barracks, decontamination center for OPERATIONS CROSSROADS personnel. 2002 Survey completed. Contamination Potential: UNLIKELY.																				
B-1	103	Unlikely	1	68.45	1	68.45	20	43-37-1	64.1	440	12	2.0	-4	-1	16	4	-297	-73	222	77
B-1	103	Unlikely	2	68.45	1	68.45	20	43-37-1	64.1	359	12	2.5	-5	-2	14	5	-247	-49	166	69
B-1	103	Unlikely	3	68.45	1	68.45	20	43-37-1	64.1	435	12	2.0	-4	-1	14	4	-322	-143	112	73
B-1	103	Unlikely	4	76.38	1	76.38	20	43-37-1	64.1	763	12	1.3	-5	-1	18	6	-233	-28	182	66
B-1	103	Unlikely	5	55.29	1	55.29	20	43-37-1	64.1	633	12	1.1	-5	0	15	5	-329	-132	104	64
B-1	103	Unlikely	6	70.32	1	70.32	20	43-37-1	64.1	805	12	1.1	-5	-2	18	5	-267	-90	118	64
B-1	103	Unlikely	7	12	1	12.00	20	43-37-1	64.1	206	12	0.8	-5	0	16	6	-172	24	243	93
B-1	103	Unlikely	8	79.58	1	79.58	20	43-37-1	64.1	718	12	1.4	-4	-1	16	4	-293	-115	157	70
B-1	103	Unlikely	9	62.36	1	62.36	20	43-37-1	64.1	405	12	2.0	-4	-2	20	4	-302	-129	88	73
B-1	103	Unlikely	10	62.35	1	62.35	20	43-37-1	64.1	502	12	1.6	-5	-1	15	5	-371	-112	108	72
B-1	103	Unlikely	11	205.36	2	102.68	20	43-37	46.4	520	12	3.5	-5	-2	22	7	-412	-200	-3	70
B-1	103	Unlikely	12	76.38	2	38.19	20	43-37-1	64.1	303	12	1.6	-5	-2	16	5	-180	-28	189	70
B-1	103	Unlikely	13	60.78	2	30.39	20	43-37-1	64.1	236	12	1.7	-5	3	14	5	-180	12	189	74
B-1	103	Unlikely	14	70.32	2	35.16	20	43-37-1	64.1	320	12	1.4	-5	1	16	6	-266	-24	230	89
B-1	103	Unlikely	16	23.53	2	11.77	20	43-37-1	64.1	160	12	1.0	-5	0	14	6	-122	29	256	72
B-1	103	Unlikely	17	204.21	2	102.11	20	43-37-1	64.1	551	12	2.4	-5	-1	16	6	-196	-2	250	82
B-1	103	Unlikely	18	68.45	1	68.45	20	43-37-1	64.1	326	12	2.7	-5	-2	15	5	-316	-120	110	74
B-1	103	Unlikely	19	68.45	1	68.45	20	43-37-1	64.1	424	12	2.1	-5	-1	16	5	-276	-60	195	80
B-1	103	Unlikely	20	68.45	1	68.45	20	43-37-1	64.1	495	12	1.8	-5	-2	16	5	-187	14	324	74
B-1	103	Unlikely	21	76.38	1	76.38	20	43-37-1	64.1	1000	12	1.0	-5	-1	18	5	-302	-106	275	66
B-1	103	Unlikely	22	55.29	1	55.29	20	43-37-1	64.1	620	12	1.2	-4	-1	14	5	-336	-145	76	66
B-1	103	Unlikely	23	70.32	1	70.32	20	43-37-1	64.1	775	12	1.2	-5	-1	16	5	-300	-62	190	88
B-1	103	Unlikely	24	79.58	1	79.58	20	43-37-1	64.1	588	12	1.8	-4	-1	14	4	-375	-195	8	69
B-1	103	Unlikely	25	62.36	1	62.36	20	43-37-1	64.1	393	12	2.1	-5	-2	18	5	-270	-50	206	78
B-1	103	Unlikely	26	62.35	1	62.35	20	43-37-1	64.1	499	12	1.6	-5	-2	15	5	-415	-125	135	119
B-1	103	Unlikely	27	205.36	2	102.68	20	43-37-1	64.1	560	12	2.4	-5	-2	18	5	-218	94	409	95
B-1	103	Unlikely	28	76.38	2	38.19	20	43-37-1	64.1	265	12	1.9	-4	-1	14	5	-298	-56	300	92
B-1	103	Unlikely	29	49.11	2	24.56	20	43-37-1	64.1	240	12	1.3	-5	-1	14	6	-340	-96	151	92
B-1	103	Unlikely	30	70.32	2	35.16	20	43-37	46.4	299	12	2.1	-5	1	24	8	-301	-37	433	99
B-1	103	Unlikely	31	204.21	2	102.11	20	43-37-1	64.1	549	12	2.4	-4	2	14	5	-249	-74	92	64
B-1	103	Unlikely	32	12.96	1	12.96	20	43-37-1	64.1	149	12	1.1	-5	0	25	6	61	319	604	86
B-1	103	Unlikely	33	12.96	2	6.48	20	43-68	19.8	99	12	2.8	-10	-1	60	16	-447	-28	396	177

HRA info: Building 113, Ex-submarine repair shop, Tug maintenance, salvage diver facility, torpedo storage and overhaul, sample storage from atomic weapons tests. 1996 - No survey required; Determined only sealed check sources were used. Contamination Potential: UNLIKELY.																				
B-1	113	Unlikely	1	16.68	1	16.68	20	43-37	46.4	179	12	1.7	-6	-2	30	7	-231	32	346	134
B-1	113	Unlikely	2	76.22	1	76.22	20	43-37-1	64.1	745	12	1.3	-9	-6	5	5	-614	-255	53	101
B-1	113	Unlikely	3	69.77	1	69.77	20	43-37-1	64.1	553	12	1.6	-9	-6	4	4	-563	-292	7	112
B-1	113	Unlikely																		

Parcel	Building	HRA Contamination Potential	Survey Unit	Area (m ²)	Class	Scan Area ¹ (m ²)	Static Total	Scan Probe Model Type	Probe Length (cm)	Scan Total ²	Scan Interval (s)	Approx. Speed ³ (cm/s)	Alpha DPM/100 cm ²				Beta DPM/100 cm ²			
													Min	Average	Max	Standard Dev	Min	Average	Max	Standard Dev
B-1	113	Unlikely	13	60.3	1	60.30	20	43-37-1	64.1	432	12	1.8	-5	2	15	4	-88	70	230	48
B-1	113	Unlikely	14	46.13	1	46.13	20	43-37-1	64.1	255	12	2.4	-5	0	11	5	-275	-118	39	71
B-1	113	Unlikely	15	32.61	1	32.61	20	43-37	46.4	320	12	1.8	-4	2	27	6	-373	-191	91	81
B-1	113	Unlikely	16	99.31	1	99.31	20	43-37-1	64.1	621	12	2.1	-9	-6	19	5	-463	-188	52	89
B-1	113	Unlikely	17	99.54	1	99.54	20	43-37-1	64.1	543	12	2.4	-5	0	26	7	-58	202	480	94
B-1	113	Unlikely	18	99.67	1	99.67	20	43-37	46.4	564	12	3.2	-6	-1	41	8	-302	7	825	129
B-1	113	Unlikely	19	99.02	1	99.02	20	43-37	46.4	599	12	3.0	-4	-1	34	7	-199	75	428	102
B-1	113	Unlikely	20	55.43	1	55.43	20	43-37-1	64.1	754	12	1.0	-3	1	25	6	-68	153	372	85
B-1	113	Unlikely	21	73	1	73.00	20	43-37-1	64.1	504	12	1.9	-9	-5	42	6	-521	-233	121	101
B-1	113	Unlikely	22	59.76	1	59.76	20	43-37-1	64.1	450	12	1.7	-9	-5	10	6	-508	-238	29	77
B-1	113	Unlikely	23	63.38	1	63.38	20	43-37-1	64.1	388	12	2.1	-9	-5	13	5	-963	-138	129	90
B-1	113	Unlikely	24	41.27	1	41.27	20	43-37-1	64.1	428	12	1.3	-9	-6	12	5	-432	-210	86	87
B-1	113	Unlikely	25	42.23	1	42.23	20	43-37-1	64.1	430	12	1.3	-3	0	18	5	-64	146	403	84
B-1	113	Unlikely	26	164.41	2	82.21	20	43-68	19.8	650	12	5.3	-14	1	83	26	-371	80	824	212
B-1	113	Unlikely	27	143.2	2	71.60	20	43-68	19.8	710	12	4.2	-23	-8	72	25	-354	-48	582	209
B-1	113	Unlikely	28	185.87	2	92.94	20	43-68	19.8	829	12	4.7	-23	-8	81	26	-354	-53	425	200
B-1	113	Unlikely	29	538.09	2	269.05	20	43-68	19.8	2255	12	5.0	-16	-2	88	25	-196	114	705	200
B-1	113	Unlikely	30	102.62	2	51.31	20	43-68	19.8	420	12	5.1	-6	-1	81	16	-309	319	824	258
B-1	113	Unlikely	31	206.39	2	103.20	20	43-68	19.8	900	12	4.8	-16	-2	71	26	-311	82	683	189
B-1	113	Unlikely	32	127.48	2	63.74	20	43-37	46.4	298	12	3.8	-5	-2	13	5	-251	-50	886	96
B-1	113	Unlikely	33	289.4	2	144.70	21	43-68	19.8	1105	12	5.5	-14	-6	74	20	-395	38	2194 ^b	238

HRA Info: Building 113A, Torpedo Storage Building, Non-Destructive Test Facility (Radiography), Machine Shop, Radioactive Material Storage Building. 1974 Shipyard closure survey: No detectable activity. Contamination Potential: UNLIKELY.																				
B-1	113A	Unlikely	1	52.68	1	52.68	20	43-37-1	64.1	500	12	1.4	-9	-5	5	5	-319	-9	341	108
B-1	113A	Unlikely	2	30	1	30.00	20	43-37-1	64.1	407	12	1.0	-9	-5	5	5	-396	-83	286	123
B-1	113A	Unlikely	3	35.84	1	35.84	20	43-37-1	64.1	652	12	0.7	-5	1	15	4	-70	114	356	70
B-1	113A	Unlikely	4	26.11	1	26.11	20	43-37-1	64.1	180	12	1.9	-5	1	12	4	-5	65	186	42
B-1	113A	Unlikely	5	80.66	1	80.66	20	43-37-1	64.1	461	12	2.3	-4	2	16	4	12	288	656	111
B-1	113A	Unlikely	6	68.94	1	68.94	20	43-37-1	64.1	281	12	3.2	-5	2	14	4	144	442	773	102
B-1	113A	Unlikely	7	22.09	1	22.09	20	43-37-1	64.1	300	12	1.0	-9	-5	4	5	-304	52	431	128
B-1	113A	Unlikely	8	38.03	1	38.03	20	43-37	46.4	421	12	1.6	-7	1	24	8	-142	140	499	115
B-1	113A	Unlikely	9	62.19	1	62.19	20	43-37-1	64.1	768	12	1.1	-9	-6	5	4	-726	-170	307	204
B-1	113A	Unlikely	10	32.63	1	32.63	20	43-37-1	64.1	254	12	1.7	-14	-10	8	6	-156	276	545	174
B-1	113A	Unlikely	11	9.57	1	9.57	20	43-37-1	64.1	136	12	0.9	-14	-8	13	7	-396	-220	-63	70
B-1	113A	Unlikely	12	349.51	2	174.76	21	43-37	46.4	800	12	3.9	-12	-6	16	7	-184	165	833	120
B-1	113A	Unlikely	13	38.07	2	19.04	20	43-37-1	64.1	110	12	2.2	-14	-8	1	5	0	192	805	99
B-1	113A	Unlikely	14	67.7	2	33.85	20	43-37	46.4	180	12	3.4	-12	-8	26	7	24	264	579	109
B-1	113A	Unlikely	15	32.99	2	16.50	20	43-37	46.4	152	12	1.9	-12	-7	20	7	-18	262	496	104
B-1	113A	Unlikely	16	6.11	1	6.11	20	43-37-1	64.1	171	12	0.5	-4	0	16	5	-489	-192	-23	84

HRA Info: Building 130, LLRW storage area of Ra-226, shop service, ship repair, machine shop. 2002 Elevated readings noted and attributed																		

Parcel	Building	HRA Contamination Potential	Survey Unit	Area (m ²)	Class	Scan Area ¹ (m ²)	Static Total	Scan Probe Model Type	Probe Length (cm)	Scan Total ²	Scan Interval (s)	Approx. Speed ³ (cm/s)	Alpha DPM/100 cm ²					Beta DPM/100 cm ²				
													Min	Average	Max	Standard Dev	Min	Average	Max	Standard Dev		
B-2	130	Unlikely	11	62.55	1	62.55	20	43-37-1	64.1	293	12	2.8	-3	3	30	7	-695	12	1651 ^a	198		
B-2	130	Unlikely	12	92.9	1	92.90	20	43-37-1	64.1	335	12	3.6	-4	4	17	4	-207	130	464	113		
B-2	130	Unlikely	13	78.97	1	78.97	20	43-37-1	64.1	588	12	1.7	-4	2	15	4	-198	184	466	99		
B-2	130	Unlikely	14	86.88	1	86.88	20	43-37-1	64.1	351	12	3.2	-3	1	15	5	-154	98	246	79		
B-2	130	Unlikely	15	89.41	1	89.41	20	43-37-1	64.1	339	12	3.4	-3	3	16	3	-71	125	350	69		
B-2	130	Unlikely	16	76.13	1	76.13	20	43-37-1	64.1	264	12	3.7	-5	-1	21	6	-178	31	333	90		
B-2	130	Unlikely	18	66.43	1	66.43	20	43-37-1	64.1	270	12	3.2	-9	-5	17	5	-415	-176	152	101		
B-2	130	Unlikely	19	78.83	1	78.83	20	43-37-1	64.1	403	12	2.5	-5	-1	20	6	-225	25	329	111		
B-2	130	Unlikely	20	59.71	1	59.71	20	43-37-1	64.1	320	12	2.4	-5	2	14	3	-29	168	373	78		
B-2	130	Unlikely	21	89.13	1	89.13	20	43-37-1	64.1	391	12	3.0	-4	2	17	5	-156	137	435	102		
B-2	130	Unlikely	22	38.87	1	38.87	20	43-37-1	64.1	201	12	2.5	-3	2	10	2	-27	85	219	50		
B-2	130	Unlikely	23	30.36	1	30.36	20	43-37-1	64.1	186	12	2.1	-5	0	19	6	-268	-69	194	76		
B-2	130	Unlikely	24	29.46	1	29.46	20	43-37-1	64.1	223	12	1.7	-4	3	23	4	-78	98	243	62		
B-2	130	Unlikely	25	92.67	1	92.67	20	43-37-1	64.1	451	12	2.7	-5	5	23	4	-114	187	624	106		
B-2	130	Unlikely	26	87.18	1	87.18	20	43-37-1	64.1	392	12	2.9	-3	2	9	2	-59	78	193	44		
B-2	130	Unlikely	27	87.18	1	87.18	20	43-37-1	64.1	370	12	3.1	-3	3	13	3	87	303	597	88		
B-2	130	Unlikely	28	89.21	1	89.21	20	43-37-1	64.1	363	12	3.2	-2	3	14	3	28	229	472	78		
B-2	130	Unlikely	29	62.4	1	62.40	20	43-37-1	64.1	395	12	2.1	-6	-2	11	5	-219	19	292	90		
B-2	130	Unlikely	30	71.11	1	71.11	20	43-37-1	64.1	362	12	2.6	-3	5	17	3	-44	101	334	67		
B-2	130	Unlikely	31	88.19	1	88.19	20	43-37-1	64.1	720	12	1.6	-7	2	20	5	-379	11	324	144		
B-2	130	Unlikely	32	96.3	1	96.30	20	43-37-1	64.1	384	12	3.3	-4	-2	24	5	-64	246	495	91		
B-2	130	Unlikely	33	58.93	1	58.93	20	43-37-1	64.1	465	12	1.6	-3	-1	15	5	-218	29	300	97		
B-2	130	Unlikely	34	52.52	1	52.52	20	43-37-1	64.1	325	12	2.1	-5	2	29	7	-220	-36	147	68		
B-2	130	Unlikely	35	449.69	2	224.85	20	43-68	19.8	1775	12	5.3	-16	24	88	20	-208	494	1130 ^a	303		
B-2	130	Unlikely	36	900.38	2	450.19	22	43-68	19.8	3030	12	6.3	-16	-4	79	22	-598	27	900	238		
B-2	130	Unlikely	37	216.81	2	108.41	20	43-37-1	64.1	460	12	3.1	-5	-1	16	5	-435	-193	462	111		
B-2	130	Unlikely	38	575.61	2	287.81	20	43-68	19.8	2798	12	4.3	-8	-3	75	12	-728	184	1087 ^a	280		
B-2	130	Unlikely	39	318.53	2	159.27	20	43-68	19.8	1476	12	4.5	-8	-2	71	16	-164	315	789	287		
B-2	130	Unlikely	40	20.06	1	20.06	20	43-37	46.4	445	12	0.8	-4	0	24	6	-120	164	367	81		

HRA info: Building 140, Pumphouse and discharge channel for drydock 3. No previous investigations conducted. Contamination Potential: UNLIKELY.

B-2	140	Unlikely	1	99.8	1	99.80	18	43-37-1	64.1	760	12	1.7	-13	-7	15	7	-953	-231	339	295
B-2	140	Unlikely	2	51.97	1	51.97	18	43-37	46.4	500	12	1.9	-12	-5	30	9	22	435	799	126
B-2	140	Unlikely	3	66.77	1	66.77	19	43-37-1	64.1	580	12	1.5	-14	-7	23	8	-120	234	975	126

HRA info: Building 146, Industrial and Photo Laboratory, general shops, radioactive waste storage area, radioluminescent device turn-in building. 1974 No activity detected. 2002, Class 3 survey conducted. Contamination Potential: LIKELY.

B-1	146	Likely	1	63.46	1	63.46	20	43-37-1	64.1	508	12	1.6	-13	-7	26	7	-419	57	344	115
B-1	146	Likely	2	80.45	1	80.45	20	43-37-1	64.1	430	12	2.4	-14	-9	19	7	-209	51	288	80
B-1	146	Likely	3	91.76	1	91.76	20	43-37-1	64.1	519	12	2.3	-14	-9	17	7	-152	77	580	136
B-1	146																			

Parcel	Building	HRA Contamination Potential	Survey Unit	Area (m ²)	Class	Scan Area ¹ (m ²)	Static Total	Scan Probe Model Type	Probe Length (cm)	Scan Total ²	Scan Interval (s)	Approx. Speed ³ (cm/s)	Alpha DPM/100 cm ²					Beta DPM/100 cm ²				
													Min	Average	Max	Standard Dev	Min	Average	Max	Standard Dev		
B-1	146	Likely	19	9.48	1	9.48	20	43-37-1	64.1	222	12	0.6	-10	-5	24	7	-231	-75	418	96		
B-1	146	Likely	20	5.75	1	5.75	20	43-37-1	64.1	130	12	0.6	-10	-4	20	7	-214	-51	282	94		
B-1	146	Likely	21	18.75	1	18.75	20	43-37-1	64.1	250	12	1.0	-4	1	28	8	-185	7	264	84		
B-1	146	Likely	22	4.87	1	4.87	20	43-37	46.4	104	12	0.8	-14	-6	16	9	-288	-64	161	102		
B-1	146	Likely	23	520	2	260.00	20	43-68	19.8	2037	12	5.4	-17	-7	80	23	-729	-38	816	267		
B-1	146	Likely	24	169.65	2	84.83	21	43-68	19.8	601	12	5.9	-17	1	71	24	-423	-40	542	204		
B-1	146	Likely	30	20.25	2	10.13	20	43-68	19.8	135	12	3.2	-21	-11	69	23	-627	-55	783	310		
B-1	146	Likely	31	22.87	2	11.44	20	43-68	19.8	133	12	3.6	-17	-6	73	20	-655	-267	287	228		
B-1	146	Likely	32	16.95	2	8.48	20	43-68	19.8	90	12	4.0	-21	0	77	32	-677	-168	581	284		
B-1	146	Likely	33	3.57	2	1.79	20	43-68	19.8	30	12	2.5	-21	-17	53	14	-584	-2	531	274		
B-1	146	Likely	34	7.16	2	3.58	20	43-68	19.8	40	12	3.8	-25	8	66	33	-559	-83	497	246		
B-1	146	Likely	35	46.44	2	23.22	20	43-68	19.8	242	12	4.0	-21	-8	69	25	-301	205	771	225		
B-1	146	Likely	36	9.78	2	4.89	20	43-68	19.8	64	12	3.2	-21	-14	52	16	-308	161	727	237		
B-1	146	Likely	37	9.48	2	4.74	20	43-68	19.8	53	12	3.8	-21	-12	52	21	-308	99	720	230		
B-1	146	Likely	38	5.75	2	2.88	20	43-68	19.8	34	12	3.6	-17	-13	71	16	-176	172	632	223		
B-1	146	Likely	39	18.75	2	9.38	20	43-68	19.8	130	12	3.0	-21	-12	61	20	-337	116	720	228		
B-1	146	Likely	40	4.87	2	2.44	20	43-68	19.8	32	12	3.2	-17	-11	54	15	-63	376	862	330		
B-1	146	Likely	41	12.41	1	12.41	20	43-37	46.4	242	12	0.9	-4	2	20	5	-99	102	450	85		
B-1	146	Likely	42	11.92	2	5.96	20	43-68	19.8	50	12	5.0	-17	-1	65	23	-662	-225	517	274		

HRA info: Building 351, Optical Laboratories, NRDL Materials, accounts, technical div, sampling library, general research laboratories, biological research laboratory. 1955, NRDL surveyed, cleared for release limits at the time, 2002 surveyed completed. Contamination Potential: LIKELY.

G	351	Likely	1	13	1	13.00	20	43-37	46.4	135	12	1.7	3	9	31	7	-307	-184	20	72
G	351	Likely	2	12	1	12.00	20	43-37	46.4	182	12	1.2	-2	2	22	5	-366	-205	106	106
G	351	Likely	3	97	1	97.00	20	43-37-1	64.1	350	12	3.6	-5	9	26	4	-191	-35	194	80
G	351	Likely	4	60	1	60.00	20	43-37	46.4	442	12	2.4	-2	5	28	7	-635	-209	158	102
G	351	Likely	5	71	1	71.00	20	43-37-1	64.1	574	12	1.6	3	7	28	4	-196	-57	188	78
G	351	Likely	6	97	1	97.00	20	43-37	46.4	520	12	3.4	1	7	27	5	-317	-192	193	72
G	351	Likely	7	87	1	87.00	20	43-37	46.4	491	12	3.2	1	7	33	6	-317	-198	64	76
G	351	Likely	8	82	1	82.00	20	43-37	46.4	656	12	2.2	-4	2	24	6	-359	-229	92	91
G	351	Likely	9	53	1	53.00	20	43-37	46.4	420	12	2.3	-4	2	24	5	-359	-259	56	62
G	351	Likely	10	23	1	23.00	21	43-37	46.4	235	12	1.8	1	8	35	6	-405	-190	64	72
G	351	Likely	11	20	1	20.00	20	43-37	46.4	257	12	1.4	-4	3	24	7	-474	-217	-5	83
G	351	Likely	17	10	1	10.00	20	43-37	46.4	162	12	1.1	-11	-5	22	8	-480	-159	203	139
G	351	Likely	18	25	1	25.00	21	43-37/43-37-1	46.4/64.1	111	12	3.6	-14	-8	40	10	-412	65	494	194
G	351	Likely	19	22	1	22.00	20	43-37-1	64.1	252	12	1.1	-5	-2	27	6	-272	4	377	119
G	351	Likely	20	40	1	40.00	20	43-37-1	64.1	302	12	1.7	-12	-8	26	7	-285	1	323	101
G	351	Likely	21	90.72	1	90.72	20	43-37-1	64.1	339	12	3.5	-12	-8	25	6	-101	119	443	85
G	351	Likely	22	64	1	64.00	20	43-37-1	64.1	439	12	1.9	-12	-8	17	6	-272	88	494	151
G	351	Likely	23	4	1	4.00	20	43-37/43-37-1	46.4/64.1	88	12	0.7	-14	-9	12	7	-194	77	491	140
G	351	Likely	24	15	1	15.00	20	43-37-1	64.1	234	12	0.8	-11	-4	20	8	-353	-165	245	127
G	351	Likely	25	41	1	41.00														

Parcel	Building	HRA Contamination Potential	Survey Unit	Area (m ²)	Class	Scan Area ¹ (m ²)	Static Total	Scan Probe Model Type	Probe Length (cm)	Scan Total ²	Scan Interval (s)	Approx. Speed ³ (cm/s)	Alpha DPM/100 cm ²				Beta DPM/100 cm ²			
													Min	Average	Max	Standard Dev	Min	Average	Max	Standard Dev
G	351	Likely	35	23.6	1	23.60	26	43-37/43-37-1	46.4/64.1	169	12	2.0	-19	-5	30	8	-545	-21	253	166
G	351	Likely	36	17	1	17.00	20	43-37	46.4	149	12	2.0	-19	-14	24	9	-542	-272	125	124
G	351	Likely	39	755	2	377.50	20	43-37/43-37-1	46.4/64.1	3414	12	1.7	-7	-3	32	6	-716	-240	371	159
G	351	Likely	40	756	2	378.00	20	43-37-1	64.1	522	12	9.4	-11	-7	16	5	-186	221	515	108
G	351	Likely	42	73	1	73.00	20	43-37-1	64.1	514	12	1.8	-13	-6	26	7	-542	-142	302	148
G	351	Likely	43	71	1	71.00	20	43-37-1	64.1	399	12	2.3	-13	-6	24	7	-426	-179	126	96
G	351	Likely	44	70	1	70.00	20	43-37/43-37-1	46.4/64.1	554	12	2.0	-19	-7	32	11	-311	-13	518	140
G	351	Likely	45	65	1	65.00	22	43-37-1	64.1	506	12	1.7	-13	-4	36	8	-401	-138	148	91
G	351	Likely	46	71	1	71.00	46	43-37/43-37-1	46.4/64.1	529	12	1.8	-19	-6	26	8	-389	-128	136	98
G	351	Likely	47	70	1	70.00	25	43-37/43-37-1	46.4/64.1	470	12	2.1	-19	-1	50	12	-439	45	374	160
G	351	Likely	48	73	1	73.00	20	43-37	46.4	391	12	3.4	-19	-10	30	11	-436	-63	263	124
G	351	Likely	49	73	1	73.00	20	43-37/43-37-1	46.4/64.1	390	12	2.5	-19	-7	30	9	-376	425	812	215
G	351	Likely	50	73	1	73.00	22	43-37/43-37-1	46.4/64.1	393	12	2.5	-19	-8	33	8	-431	-95	170	102
G	351	Likely	51	70	1	70.00	50	43-37	46.4	483	12	2.6	-19	-11	30	10	-684	-70	6361 ^b	376
G	351	Likely	52	720	2	360.00	20	43-37-1	64.1	772	12	6.1	-4	-1	24	5	-76	170	480	100
G	351	Likely	53	75	2	37.50	20	43-37	46.4	1928	12	0.3	-6	2	24	7	-467	-114	388	130
G	351	Likely	54	10	2	5.00	20	43-37-1	64.1	125	12	0.5	-3	0	15	5	-208	-53	192	84

HRA info: Building 351A, NRDL Chemical, chemistry branch, metrology lab, material storage area, instrument calibration lab, radiography shop. 1955, NRDL surveyed, cleared for release limits at the time, 2002 surveyed completed, found and remediated Cs-137, contamination remained in place at back steps of building. Contamination Potential: Known.

G	351A	Known	1	14.63	1	14.63	20	43-37-1	64.1	162	12	2.3	-15	-9	31	9	-293	26	383	112
G	351A	Known	3	42.87	1	42.87	20	43-37	46.4	371	12	2.1	-16	-11	26	9	-366	-63	223	112
G	351A	Known	5	57.86	1	57.86	46	43-37-1	64.1	295	12	2.5	-15	-9	34	8	-258	12	344	115
G	351A	Known	6	12.6	1	12.60	20	43-37-1	64.1	123	12	1.3	-15	-9	25	8	-144	111	354	110
G	351A	Known	7	75.22	1	75.22	40	43-37-1	64.1	969	12	1.0	-15	-7	38	9	-407	121	8801 ^f	968
G	351A	Known	8	26.44	1	26.44	20	43-37-1	64.1	236	12	1.5	-5	0	23	6	-307	-65	242	97
G	351A	Known	9	69.59	1	69.59	20	43-37-1	64.1	438	12	2.1	-5	-2	30	6	-302	-83	177	85
G	351A	Known	10	69.65	1	69.65	20	43-37-1	64.1	452	12	2.0	-13	-8	19	7	-264	-36	214	91
G	351A	Known	11	24	1	24.00	20	43-37-1	64.1	214	12	1.5	-13	-8	18	6	-330	-17	334	138
G	351A	Known	12	67	1	67.00	21	43-37	46.4	445	12	2.7	-13	-9	45	8	-388	-31	296	114
G	351A	Known	13	92.34	1	92.34	21	43-37	46.4	1069	12	1.6	-16	-8	45	10	-477	-71	425	116
G	351A	Known	14	44	1	44.00	20	43-37-1	64.1	345	12	1.7	-15	-9	16	7	-403	-54	335	142
G	351A	Known	16	22.01	1	22.01	20	43-37-1	64.1	319	12	0.9	-16	-11	22	8	-322	-13	349	127
G	351A	Known	18	23.3	1	23.30	20	43-37-1	64.1	232	12	1.3	-15	-9	32	8	-345	37	684	197
G	351A	Known	19	52.04	1	52.04	46	43-37-1	64.1	270	12	2.5	-5	-2	20	6	-521	-221	27	116
G	351A	Known	20	56.35	1	56.35	20	43-37-1	64.1	319	12	2.3	-13	-9	14	6	-341	-3	286	108
G	351A	Known	21	63.64	1	63.64	23	43-37-1	64.1	709	12	1.2	-16	-8	42	10	-438	-68	664	204
G	351A	Known	22	54.85	1	54.85	20	43-37-1	64.1	355	12	2.0	-13	-7	29	7	-705	-352	28	160
G	351A	Known	23	42.28	1	42.28	20	43-37-1	64.1	232	12	2.4	-5	-1	26	7	-416	-152	309	102
G	351A	Known	24	31.38	1	31.38	20	43-37-1	64.1	271	12	1.5	-15	-9	31	8	-340	15	491	196
G	351A	Known	25	49.56	1	49.56	46	43-37-1	64.1	330	12	2.								

Parcel	Building	HRA Contamination Potential	Survey Unit	Area (m ²)	Class	Scan Area ¹ (m ²)	Static Total	Scan Probe Model Type	Probe Length (cm)	Scan Total ²	Scan Interval (s)	Approx. Speed ³ (cm/s)	Alpha DPM/100 cm ²				Beta DPM/100 cm ²			
													Min	Average	Max	Standard Dev	Min	Average	Max	Standard Dev
G	351A	Known	35	22.6	1	22.60	20	43-37	46.4	316	12	1.3	-16	-9	26	9	-306	-5	353	125
G	351A	Known	36	55.06	1	55.06	72	43-37	46.4	642	12	1.5	-16	-10	32	9	-396	-22	365	152
G	351A	Known	37	12.52	1	12.52	46	43-37-1	64.1	129	12	1.3	-15	-9	18	8	-366	-15	323	176
G	351A	Known	38	13.68	1	13.68	20	43-37	46.4	181	12	1.4	-14	-8	24	9	-230	100	388	138
G	351A	Known	39	13.95	1	13.95	20	43-37-1	64.1	130	12	1.4	-15	-10	23	8	-361	-33	259	149
G	351A	Known	40	95.61	1	95.61	21	43-37-1	64.1	606	12	2.1	-15	-9	37	8	-405	-5	390	156
G	351A	Known	41	43.38	1	43.38	20	43-37	46.4	383	12	2.0	-16	-9	30	9	-352	-45	305	124
G	351A	Known	42	89.64	1	89.64	20	43-37-1	64.1	978	12	1.2	-15	-6	25	9	-312	17	480	153
G	351A	Known	43	14.93	1	14.93	40	43-37-1	64.1	176	12	1.1	-15	5	170 ^f	32	-290	92	886	286
G	351A	Known	44	14.13	1	14.13	20	43-37-1	64.1	179	12	1.0	-15	-7	26	9	-335	-41	304	153
G	351A	Known	45	990.41	2	495.21	20	43-37-1	64.1	1821	12	3.5	-8	-4	15	5	-308	-52	272	100
G	351A	Known	46	871.58	2	435.79	20	43-37-1	64.1	1699	12	3.3	-8	-4	15	5	-330	-42	330	92
G	351A	Known	47	826.14	2	413.07	20	43-37-1	64.1	1450	12	3.7	-8	-4	27	5	-722	-74	258	104

HRA Info: Building 366, NRDL instrument calibration, instrument evaluation, general laboratories, chemical research lab, shipyard radiography shop. 1955, cleared for release limits at the time, 2001 No activity above background. 2002 Ventilation ducting and floor drain indicated Cs-137 exceeding release criteria. Contamination Potential: Known.

G	366	Known	1	26	1	26.00	20	43-68/43-37-1	19.8/64.1	444	12	1.6	-24	-14	62	16	-479	1	836	234
G	366	Known	2	42.93	1	42.93	20	43-68/43-37/43-37-1	19.8/46.4/64.1	406	12	2.0	-15	-5	84	11	-555	-1	878	178
G	366	Known	3	34.62	1	34.62	20	43-68/43-37-1	19.8/64.1	193	12	3.1	-24	-10	80	17	-472	77	592	183
G	366	Known	4	40.17	1	40.17	20	43-68/43-37-1	19.8/64.1	227	12	2.8	-11	0	75	11	-354	44	518	132
G	366	Known	5	63.94	1	63.94	20	43-68/43-37/43-37-1	19.8/46.4/64.1	449	12	2.2	-24	-4	80	12	-391	72	666	119
G	366	Known	6	26.96	1	26.96	20	43-68/43-37	19.8/64.4	165	12	3.2	-21	-8	47	10	-421	116	739	202
G	366	Known	7	93.08	1	93.08	20	43-37/43-37-1	46.4/64.1	465	12	2.8	-5	1	34	7	-313	66	356	93
G	366	Known	8	94.76	1	94.76	20	43-37	46.4	380	12	4.5	-3	2	41	8	-23	280	557	98
G	366	Known	9	94.76	1	94.76	20	43-37-1	64.1	392	12	3.1	-13	-8	22	7	-142	46	347	81
G	366	Known	10	94.76	1	94.76	20	43-37-1	64.1	379	12	3.3	-5	2	54	9	-330	31	395	124
G	366	Known	11	97.62	1	97.62	20	43-68/43-37-1	19.8/64.1	423	12	3.2	-14	0	65	10	-292	-25	534	108
G	366	Known	12	84.21	1	84.21	20	43-37-1	64.1	318	12	3.4	-5	0	25	6	-265	-73	184	78
G	366	Known	13	77.38	1	77.38	22	43-68/43-37	19.8/46.4	640	12	3.0	-17	-3	92	17	-655	-128	694	179
G	366	Known	14	97.37	1	97.37	20	43-37	46.4	475	12	3.7	-5	-1	37	8	-428	-89	272	119
G	366	Known	18	82.01	1	82.01	20	43-68/43-37	19.8/46.4	805	12	2.5	-24	-6	62	15	-513	-163	464	140
G	366	Known	24	100	1	100.00	20	43-68/43-37-1	19.8/64.1	601	12	3.7	-24	-13	37	9	-502	15	636	140
G	366	Known	25	84.52	1	84.52	20	43-37/43-37-1	46.4/64.1	412	12	2.7	-17	-12	27	8	-355	-60	220	94
G	366	Known	26	84.52	1	84.52	20	43-37/43-37-1	46.4/64.1	444	12	2.6	-15	-2	35	7	-298	76	373	97
G	366	Known	27	84.52	1	84.52	20	43-37-1	64.1	389	12	2.8	-13	-8	29	7	-134	108	391	81
G	366	Known	28	81.55	1	81.55	20	43-68/43-37-1	19.8/64.1	614	12	2.5	-24	-13	80	13	-509	24	710	157
G	366	Known	31	84.52	1	84.52	20	43-37-1	64.1	390	12	2.8	-13	-8	25	7	-34	171	417	79
G	366	Known	32	84.52	1	84.52	20	43-68/43-37-1	19.8/64.1	439	12	2.7	-14	-8	65	9	-262	185	508	140
G	366	Known	33	87.32	1	87.32	20	43-37	46.4	397	12	4.0	-5	-1	43	7	-445	-52	277	114
G	366	Known	34	87.32	1	87.32	20	43-37/43-37-1	46.4/64.1	417	12	2.8	-13	-1	31					

Parcel	Building	HRA Contamination Potential	Survey Unit	Area (m ²)	Class	Scan Area ¹ (m ²)	Static Total	Scan Probe Model Type	Probe Length (cm)	Scan Total ²	Scan Interval (s)	Approx. Speed ³ (cm/s)	Alpha DPM/100 cm ²					Beta DPM/100 cm ²				
													Min	Average	Max	Standard Dev	Min	Average	Max	Standard Dev		
G	366	Known	51	8.99	1	8.99	20	43-37/43-37-1	46.4/64.1	142	12	1.0	-9	-1	39	10	-386	-121	93	97		
G	366	Known	52	16.72	1	16.72	20	43-37/43-37-1	46.4/64.1	252	12	1.0	-17	1	28	8	-272	-21	313	92		
G	366	Known	53	61.86	1	61.86	20	43-68/43-37-1	19.8/64.1	433	12	2.7	-13	-3	64	12	-752	-50	762	211		
G	366	Known	54	74.7	1	74.70	20	43-68/43-37-1	19.8/64.1	679	12	2.4	-17	-7	79	16	-565	-39	591	185		
G	366	Known	55	55.91	1	55.91	21	43-68/43-37/43-37-1	19.8/46.4/64.1	381	12	2.1	-13	-2	85	11	-434	-60	1738 ^b	174		
G	366	Known	56	75.09	1	75.09	20	43-68/43-37-1	19.8/64.1	716	12	2.0	-24	-12	88	17	-487	116	821	177		
G	366	Known	57	4.08	1	4.08	20	43-37	46.4	39	12	1.9	-4	1	48	11	-271	-60	166	108		
G	366	Known	58	78.59	1	78.59	46	43-68/43-37-1	19.8/64.1	744	12	2.3	-24	-15	88	16	-590	75	828	214		
G	366	Known	59	73.9	1	73.90	20	43-68/43-37-1	19.8/64.1	512	12	2.3	-24	-12	80	15	-376	121	732	158		
G	366	Known	60	757.03	2	378.52	22	43-68	19.8	2563	12	6.2	-20	-12	148 ^b	16	-703	-106	1359 ^b	233		
G	366	Known	61	934.17	2	467.09	20	43-68	19.8	2550	12	7.7	-25	-13	161 ^c	15	-1060	-245	783	275		
G	366	Known	62	919.12	2	459.56	22	43-68	19.8	2875	12	6.7	-20	-13	95	15	-1044	-256	3307 ^b	248		
G	366	Known	63	932.09	2	466.05	22	43-68	19.8	2550	12	7.7	-16	-9	79	12	-962	-245	1977 ^b	205		
G	366	Known	64	198.6	2	99.30	20	43-68	19.8	680	12	6.1	-16	-9	178 ^c	15	-742	-223	432	199		
G	366	Known	65	188.05	2	94.03	20	43-68	19.8	625	12	6.3	-16	-9	118 ^c	16	-690	-171	516	202		
G	366	Known	66	113	2	56.50	20	43-68	19.8	277	12	8.6	-8	-2	96	19	-658	-125	712	237		
G	366	Known	67	113	2	56.50	20	43-68	19.8	254	12	9.4	-21	-9	83	17	-732	-181	871	248		
G	366	Known	68	113	2	56.50	20	43-68	19.8	286	12	8.3	-19	-10	140 ^c	18	-669	-190	286	188		
G	366	Known	69	766	3	191.50	70	43-68	19.8	5477	12	1.5	-24	-5	265 ^b	29	-804	-28	5098 ^b	310		
G	366	Known	70	24	1	24.00	20	43-68	19.8	454	12	2.2	-7	-2	56	11	-217	188	611	239		

HRA Info: Building 401, Not in HRA. Contamination Potential: Unknown.

G	401	Unknown	1	91	1	91.00	20	43-37	46.4	702	12	2.3	-12	-4	41	9	-559	-145	498	196
G	401	Unknown	2	79	1	79.00	46	43-37	46.4	1352	12	1.0	-9	-1	42	9	-320	44	729	217
G	401	Unknown	3	85	1	85.00	20	43-37	46.4	534	12	2.9	-6	0	33	7	-232	130	465	150
G	401	Unknown	4	85	1	85.00	20	43-37	46.4	464	12	3.3	-12	-3	39	9	-470	-187	187	128
G	401	Unknown	5	18	1	18.00	20	43-37	46.4	243	12	1.3	-12	-5	32	7	-497	-142	254	174
G	401	Unknown	6	4	1	4.00	20	43-37	46.4	131	12	0.5	-6	-3	20	6	-214	86	647	181
G	401	Unknown	7	13	1	13.00	19	43-37	46.4	257	12	0.9	-12	-4	24	8	-453	-71	529	203
G	401	Unknown	8	25	1	25.00	20	43-37	46.4	262	12	1.7	-6	-1	24	7	-273	88	443	162
G	401	Unknown	9	12	1	12.00	20	43-37	46.4	196	12	1.1	-3	-1	25	5	-271	143	634	168
G	401	Unknown	10	84	1	84.00	20	43-37	46.4	557	12	2.7	-4	1	41	7	-130	133	488	98
G	401	Unknown	11	79	1	79.00	20	43-37	46.4	427	12	3.3	-4	1	35	7	-154	188	556	110
G	401	Unknown	12	82	1	82.00	20	43-37	46.4	420	12	3.5	-4	1	53	7	-105	287	611	130
G	401	Unknown	13	67	1	67.00	21	43-37/43-37-1	46.4/64.1	371	12	2.6	-4	2	46	8	-110	283	1128 ^b	169
G	401	Unknown	14	9	1	9.00	20	43-37	46.4	132	12	1.2	-4	0	40	8	-216	49	486	114
G	401	Unknown	15	26	1	26.00	20	43-37	46.4	318	12	1.5	-12	-2	39	9	-486	-52	387	208
G	401	Unknown	16	76	1	76.00	20	43-37	46.4	584	12	2.3	-9	-2	41	9	-476	-93	437	196
G	401	Unknown	17	79	1	79.00	20	43-37	46.4	803	12	1.8	-9	-3	38	7	-488	-128	292	175
G	401	Unknown	18	16	1	16.00	20	43-37	46.4	192	12	1.5	-3	0	31	7</td				

Parcel	Building	HRA Contamination Potential	Survey Unit	Area (m ²)	Class	Scan Area ¹ (m ²)	Static Total	Scan Probe Model Type	Probe Length (cm)	Scan Total ²	Scan Interval (s)	Approx. Speed ³ (cm/s)	Alpha DPM/100 cm ²				Beta DPM/100 cm ²			
													Min	Average	Max	Standard Dev	Min	Average	Max	Standard Dev
G	401	Unknown	31	616	2	308.00	22	43-68	19.8	1818	12	7.1	-18	-10	90	14	-759	-78	994	225
G	401	Unknown	32	86	1	86.00	20	43-37	46.4	649	12	2.4	-3	1	45	8	-78	321	753	169
G	401	Unknown	33	2	1	2.00	20	43-37	46.4	71	12	0.5	-9	1	31	8	-159	51	317	103
G	401	Unknown	34	3	1	3.00	20	43-37	46.4	55	12	1.0	-12	-3	27	8	-350	-97	175	125
G	401	Unknown	35	13	1	13.00	20	43-37	46.4	188	12	1.2	-3	0	35	7	-84	160	502	128
G	401	Unknown	36	3	1	3.00	20	43-37	46.4	70	12	0.8	-3	0	23	6	-164	49	260	95

HRA info: Building 411, Source storage, radiography shop. 2002 Ra-226 found on 2nd floor within release limits. survey complete. Contamination Potential: Unlikely

G	411	Unlikely	1	5630	3	1407.50	30	43-37-1	64.1	1182	12	15.5	-9	-5	27	6	-460	-139	203	95
G	411	Unlikely	2	585.3	3	146.33	30	43-37-1	64.1	690	12	2.8	-5	-1	40	6	-458	-54	487	125
G	411	Unlikely	3	3625	3	906.25	30	43-37/43-37-1	46.4/64.1	9026	12	1.5	-6	-1	62	7	-929	-73	415	114
G	411	Unlikely	4	3625	3	906.25	61	43-37-1	64.1	1653	12	7.1	-5	-2	34	6	-755	274	970	197
G	411	Unlikely	5	76.94	1	76.94	16	43-37-1	64.1	290	12	3.4	-2	0	10	3	413	816	1219 ^a	144
G	411	Unlikely	6	73.56	1	73.56	16	43-37-1	64.1	294	12	3.3	-2	2	33	6	260	760	1043 ^a	120
G	411	Unlikely	7	80.29	1	80.29	16	43-68/43-37-1	19.8/64.1	759	12	2.8	-12	-5	69	13	-498	373	1238 ^a	365
G	411	Unlikely	8	147.15	2	73.58	16	43-37-1	64.1	280	12	3.4	-2	1	10	4	381	857	1307 ^a	165
G	411	Unlikely	9	56.56	1	56.56	16	43-37-1	64.1	205	12	3.6	-2	0	11	3	212	519	853	110
G	411	Unlikely	10	56.56	1	56.56	16	43-37-1	64.1	205	12	3.6	-2	0	15	4	116	429	728	114
G	411	Unlikely	11	100.1	2	50.05	16	43-37-1	64.1	190	12	3.4	-2	2	22	5	248	509	988	115

HRA info: Building 439, Not in HRA, but contaminated by a tenant from Young Laboratories when relocating from Building 364. Found levels of Ra-226 and Cs-137 above release criteria. Contamination Potential: known.

G	439	Known	1	97.83	1	97.83	45	43-68/43-37	19.8/46.4	3387	12	1.0	-9	-2	183 ^f		-640	106	1292 ^a	
G	439	Known	2	97.83	1	97.83	48	43-68/43-37	19.8/46.4	4046	12	0.9	-8	1	98		-640	167	1614 ^a	
G	439	Known	3	509	2	254.50	16	43-68	19.8	2073	12	5.2	-8	-4	183 ^e		-318	238	1679 ^a	
G	439	Known	4	36	1	36.00	9	43-37	46.4	90	12	7.2	-3	-1	21	5	-375	-264	-123	61
G	439	Known	6	88	2	44.00	16	43-37	46.4	246	12	3.2	-4	0	28	7	178	479	732	99

of Survey Units calculated

351

of Survey Units calculated >= 1.37 cm/s

280

a: Beta Release Limit for this structure is 5,000 dpm/100cm²

b: Biased static measurement(s) verified false positive

c: Count pause performed during scan verified false positive

d: Disposed as LLRW during structure demolition

e: Remediated, followed by division into Class 1 units

f: Remediated, followed by RASS performed

¹ Survey unit floor area only.

² May include pauses.

³ Best case estimate assuming no pauses and no overlapping of survey lanes.

APPENDIX B

RESRAD MODELING
(on CD only)

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Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

ffffffffffii
ffffffffffii
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Time Specific Parameters.....	9
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Full Summary.....	13

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

ffffffffffii
ffffffffffii
iii iii
iii RESRAD-BUILD Input Parameters iii
iii iii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

ffffffffff Receptor Information ffffffii

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m3/day]	Inhalation [m2/hr]	Ingestion(Dust)
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

fff Receptor-Source Shielding Relationship fff

Receptor	Source	Density [g/cm3]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 3 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD Family\BUILD\3.5\130-16-surface.bld

Building Information

Building Air Exchange Rate: 8.00E-01 1/hr

Height [m]	Air Exchanges [m ³ /hr]		
Area [m ²]			

*		*	
*		*	
*		<=Q01: 1.52E+02	
H1: 2.500	*	Room 1	*
	*	LAMBDA: 8.00E-01	*
Area 76.130	*		*
	*		*

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 4 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD Family\BUILD\3.5\130-16-surface.bld

Source Information

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:7.61E+01 [m²] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

Ingestion Inhalation Submersion

[dpm/m²] [mrem/dpm] [mrem/dpm] [mrem/yr/

(dpm/m³)

RA-226 5.000E+04 5.950E-04 3.871E-03 4.663E-03

PB-210 5.000E+04 2.422E-03

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 5 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Evaluation Time: 0.0000000E+00 years

ffffffffffii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii Assessment for Time: 1 iii
iii Time =0.00E+00 yr iii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii

fffffiiii Source Information fffffiiii

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:7.61E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	5.000E+04
	PB-210	5.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 6 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Evaluation Time: 0.0000000E+00 years

ff
ff
fff fff
fff RESRAD-BUILD Dose Tables fff
fff fff
ff
ff

Source Contributions to Receptor Doses

ffffffffffffffffffffffffffffffffffffff

[mrem]

Source Total

1

Receptor 1 2.33E+00 2.33E+00

Total 2.33E+00 2.33E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 7 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

ffffffffffffffffffffff

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	6.35E-01	7.47E-03	6.52E-05	9.06E-01	6.74E-02	7.17E-01
Total	6.35E-01	7.47E-03	6.52E-05	9.06E-01	6.74E-02	7.17E-01

ED_004747_00022189-00054

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 8 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

ffffffffffffffffffffff

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.21E+00	1.21E+00
PB-210	1.70E-02	1.70E-02
PB-210	1.11E+00	1.11E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 9 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Evaluation Time: 1.00000000 years

ffffffffffii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
iii Assessment for Time: 2 iii
iii Time =1.00E+00 yr iii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii

fffffiiii Source Information fffffiiii

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:7.61E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	4.498E+04
	PB-210	4.500E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 10 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Evaluation Time: 1.00000000 years

ff
ff
fff fff
fff RESRAD-BUILD Dose Tables fff
fff fff
ffffffffffffffffffffffffffffffffffffff
ffffffffffffffffffffffffffffffffffffff

Source Contributions to Receptor Doses

ffffffffffffffffffffffffffffffffffffff

[mrem]

	Source	Total
	1	
Receptor 1	6.66E-01	6.66E-01
Total	6.66E-01	6.66E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 11 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

ffffffffffffffffffffff

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	6.02E-01	0.00E+00	0.00E+00	0.00E+00	6.38E-02	0.00E+00
Total	6.02E-01	0.00E+00	0.00E+00	0.00E+00	6.38E-02	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:40:25 Page: 12 **

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

ffffffffffffffffffffff

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	6.63E-01	6.63E-01
PB-210	1.02E-04	1.02E-04
PB-210	2.13E-03	2.13E-03

Title : Parcel B Building 130 SU 16

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-surface.bld

Full Summary

ff
ff
fff fff
fff RESRAD-BUILD Dose (Time) Tables fff
fff fff
ff
ff

Receptor Dose Received for the Exposure Duration

ffffffffffffffffffffffffffffffffffffff
(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

AAAAAAA AAAAAAA

1 2.33E+00 6.66E-01

Receptor Dose/Yr Averaged Over Exposure Duration

ffffffffffffffffffffffffffffffffffffff
(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

AAAAAAA AAAAAAA

1 2.34E+00 6.66E-01

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

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== RESRAD-BUILD Table of Contents ==

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For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

```
=====
=====
==== RESRAD-BUILD Input Parameters ====
=====
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

===== Receptor Information =====

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m ³ /day]	Inhalation [m ² /hr]	Ingestion(Dust)
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

==== Receptor-Source Shielding Relationship ===

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 3 **

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

* <=Q01: 1.52E+02

H1: 2.500 * Room 1 * Q10 : 1.52E+02

* LAMBDA: 8.00E-01 *

Area 76.130 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:3.80E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	5.000E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	5.000E+04	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 5 **

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time: 1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:3.80E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	5.000E+04
	PB-210	5.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 6 **

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	2.41E-01	2.41E-01
Total	2.41E-01	2.41E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 7 **
Title : Parcel B Building 130 SU 16 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.56E-01	3.73E-04	3.26E-06	4.52E-02	3.36E-03	3.58E-02
Total	1.56E-01	3.73E-04	3.26E-06	4.52E-02	3.36E-03	3.58E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 8 **
Title : Parcel B Building 130 SU 16 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld
Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.84E-01	1.84E-01
PB-210	8.56E-04	8.56E-04
PB-210	5.58E-02	5.58E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 9 **

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:3.80E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	4.498E+04
	PB-210	4.500E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 10 **

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor	1	1.51E-01 1.51E-01
Total		1.51E-01 1.51E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 11 **
Title : Parcel B Building 130 SU 16 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld
Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.48E-01	0.00E+00	0.00E+00	0.00E+00	3.19E-03	0.00E+00
Total	1.48E-01	0.00E+00	0.00E+00	0.00E+00	3.19E-03	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 12 **

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.51E-01	1.51E-01
PB-210	2.88E-05	2.88E-05
PB-210	6.06E-04	6.06E-04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:42:46 Page: 13 **

Title : Parcel B Building 130 SU 16 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-16-between.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 2.41E-01 1.51E-01

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 2.41E-01 1.51E-01

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

==

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For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

```
=====
=====
==== RESRAD-BUILD Input Parameters ====
=====
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

===== Receptor Information =====

Receptor	Room	x [m]	y [m]	z [m]	FracTime	Inhalation [m ³ /day]	Ingestion(Dust) [m ² /hr]
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

==== Receptor-Source Shielding Relationship ===

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 3 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

* <=Q01: 1.80E+03

H1: 2.500 * Room 1 * Q10 : 1.80E+03

* LAMBDA: 8.00E-01 *

Area 900.380 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:9.00E+02 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
PM-143	9.500E+04	4.640E-07	4.910E-06	7.681E-04
RA-226	9.500E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	9.500E+04	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 5 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time: 1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:9.00E+02 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	PM-143	9.500E+04
	RA-226	9.500E+04
	PB-210	9.500E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 6 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 5.35E+00 5.35E+00

Total 5.35E+00 5.35E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 7 **
Title : Parcel B Building 130 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.11E+00	2.48E-02	1.31E-04	1.72E+00	1.28E-01	1.36E+00
Total	2.11E+00	2.48E-02	1.31E-04	1.72E+00	1.28E-01	1.36E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 8 **
Title : Parcel B Building 130 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld
Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

PM-143	3.53E-04	3.53E-04
RA-226	3.21E+00	3.21E+00
PB-210	3.23E-02	3.23E-02
PB-210	2.11E+00	2.11E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 9 **

Title : Parcel B Building 130 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld
Evaluation Time: 1.00000000 years

=====
=====
== Assessment for Time: 2 ==
== Time =1.00E+00 yr ==
=====
=====

===== Source Information =====

Source: 1
Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]
Geometry:: Type: Area Area:9.00E+02 [m2] Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 0.000E+00
Time to Remove: 3.650E+02 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
PM-143 3.291E+04
RA-226 8.546E+04
PB-210 8.550E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 10 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	2.12E+00	2.12E+00
Total	2.12E+00	2.12E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 11 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01	0.00E+00
Total	2.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 12 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

PM-143	2.48E-06	2.48E-06
RA-226	2.11E+00	2.11E+00
PB-210	3.17E-04	3.17E-04
PB-210	6.66E-03	6.66E-03

ED_004747_00022189-00085

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:45:16 Page: 13 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-all.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 5.35E+00 2.12E+00

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 5.35E+00 2.12E+00

ED_004747_00022189-00086

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

==

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For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

```
=====
=====
==== RESRAD-BUILD Input Parameters ====
=====
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

===== Receptor Information =====

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m ³ /day]	Inhalation [m ² /hr]	Ingestion(Dust)
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

==== Receptor-Source Shielding Relationship ===

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 3 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

* <=Q01: 1.80E+03

H1: 2.500 * Room 1 * Q10 : 1.80E+03

* LAMBDA: 8.00E-01 *

Area 900.380 *

* *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:4.09E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
PM-143	9.500E+04	4.640E-07	4.910E-06	7.681E-04
RA-226	9.500E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	9.500E+04	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 5 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time: 1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:4.09E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	PM-143	9.500E+04
	RA-226	9.500E+04
	PB-210	9.500E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 6 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 1.14E+00 1.14E+00

Total 1.14E+00 1.14E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 7 **
Title : Parcel B Building 130 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.88E-01	1.13E-03	5.93E-06	7.82E-02	5.82E-03	6.19E-02
Total	9.88E-01	1.13E-03	5.93E-06	7.82E-02	5.82E-03	6.19E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 8 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

PM-143	1.89E-05	1.89E-05
RA-226	1.03E+00	1.03E+00
PB-210	1.52E-03	1.52E-03
PB-210	9.91E-02	9.91E-02

ED_004747_00022189-00094

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 9 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:4.09E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	PM-143	3.291E+04
	RA-226	8.546E+04
	PB-210	8.550E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 10 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	9.41E-01	9.41E-01
Total	9.41E-01	9.41E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 11 **
Title : Parcel B Building 130 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld
Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.36E-01	0.00E+00	0.00E+00	0.00E+00	5.51E-03	0.00E+00
Total	9.36E-01	0.00E+00	0.00E+00	0.00E+00	5.51E-03	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 12 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

PM-143	1.16E-06	1.16E-06
RA-226	9.38E-01	9.38E-01
PB-210	1.63E-04	1.63E-04
PB-210	3.43E-03	3.43E-03

ED_004747_00022189-00098

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:46:36 Page: 13 **

Title : Parcel B Building 130 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\130-36-between.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 1.14E+00 9.41E-01

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 1.14E+00 9.42E-01

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

=====

=====

==
== RESRAD-BUILD Table of Contents
==

=====

=====

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For time = 0.00E+00 yr	
Time Specific Parameters.....	5
Receptor-Source Dose Summary.....	6
Dose by Pathway Detail.....	7
Dose by Nuclide Detail.....	8
For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

```
=====
=====
=====  
===  
==      RESRAD-BUILD Input Parameters      ==  
===  
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

```
===== Receptor Information =====
```

Receptor	Room	x [m]	y [m]	z [m]	FracTime	Inhalation [m ³ /day]	Ingestion(Dust) [m ² /hr]
1	1	1.000	1.000	1.000	1.000	1.80E+01	1.00E-04

```
== Receptor-Source Shielding Relationship ==
```

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/23/14 15:17:17 Page: 3 **

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

----- Building Information -----

Building Air Exchange Rate: 8.00E-01 1/hr

```

Height[m]          Air Exchanges [m3/hr]
Area [m2]

*****
*                                     *
*                                     *
*                                     *
*                                     <=Q01: 1.90E+02
H1:    2.500   *           Room 1      *       Q10 : 1.90E+02
*           LAMBDA: 8.00E-01      *
Area  94.760   *                                     *
*                                     *
*****
```

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 1.00 y: 1.00 z: 0.00[m]

Geometry:: Type: Area Area:9.48E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	7.000E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	7.000E+04	2.422E-03	6.214E-03	4.698E-06

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time:  1      ====
====      Time =0.00E+00 yr      ====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 1.00 y: 1.00 z: 0.00 [m]

Geometry:: Type: Area Area:9.48E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	7.000E+04
	PB-210	7.000E+04

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 3.33E+00 3.33E+00

Total 3.33E+00 3.33E+00

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.48E-01	1.11E-02	9.13E-05	1.27E+00	9.43E-02	1.00E+00
Total	9.48E-01	1.11E-02	9.13E-05	1.27E+00	9.43E-02	1.00E+00

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.75E+00	1.75E+00
PB-210	2.38E-02	2.38E-02
PB-210	1.55E+00	1.55E+00

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 1.00000000 years

```
=====
=====
==      Assessment for Time:  2      ==
==      Time =1.00E+00 yr      ==
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 1.00 y: 1.00 z: 0.00 [m]
Geometry:: Type: Area Area:9.48E+01 [m²] Direction: z
Pathway ::
 Direct Ingestion Rate: 0.000E+00 [1/hr]
 Fraction released to air: 1.000E-01
 Removable fraction: 0.000E+00
 Time to Remove: 3.650E+02 [day]

Contamination:: Nuclide Concentration
 [dpm/m²]
RA-226 6.297E+04
PB-210 6.300E+04

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	9.87E-01	9.87E-01
Total	9.87E-01	9.87E-01

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	8.97E-01	0.00E+00	0.00E+00	0.00E+00	8.93E-02	0.00E+00
Total	8.97E-01	0.00E+00	0.00E+00	0.00E+00	8.93E-02	0.00E+00

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	9.83E-01	9.83E-01
PB-210	1.50E-04	1.50E-04
PB-210	3.15E-03	3.15E-03

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Full Summary

```
=====
=====
===
      RESRAD-BUILD Dose (Time) Tables
===
=====
```

Receptor Dose Received for the Exposure Duration

```
=====
=====
```

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 3.33E+00 9.87E-01

Receptor Dose/Yr Averaged Over Exposure Duration

```
=====
=====
```

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 3.33E+00 9.87E-01

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

=====

=====

==
== RESRAD-BUILD Table of Contents
==

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Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

```
=====
=====
=====  
===  
==      RESRAD-BUILD Input Parameters      ==  
===  
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

```
===== Receptor Information =====
```

Receptor	Room	x [m]	y [m]	z [m]	FracTime	Inhalation [m ³ /day]	Ingestion(Dust) [m ² /hr]
1	1	1.000	1.000	1.000	1.000	1.80E+01	1.00E-04

```
== Receptor-Source Shielding Relationship ==
```

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height [m] Air Exchanges [m³/hr]Area [m²]

* * *

* * *

<=Q01: 1.90E+02

H1: 2.500 * Room 1 * Q10 : 1.90E+02

* LAMBDA: 8.00E-01 *

Area 94.760 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 1.00 y: 1.00 z: 0.00[m]

Geometry:: Type: Area Area:4.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	7.000E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	7.000E+04	2.422E-03	6.214E-03	4.698E-06

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time:  1      ====
====      Time =0.00E+00 yr      ====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 1.00 y: 1.00 z: 0.00 [m]

Geometry:: Type: Area Area:4.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	7.000E+04
	PB-210	7.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/23/14 15:19:11 Page: 6 **

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 3.70E-01 3.70E-01

Total 3.70E-01 3.70E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/23/14 15:19:11 Page: 7 **

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.53E-01	5.53E-04	4.53E-06	6.29E-02	4.68E-03	4.98E-02
Total	2.53E-01	5.53E-04	4.53E-06	6.29E-02	4.68E-03	4.98E-02

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	2.91E-01	2.91E-01
PB-210	1.19E-03	1.19E-03
PB-210	7.78E-02	7.78E-02

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00 yr      ====
=====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 1.00 y: 1.00 z: 0.00 [m]

Geometry:: Type: Area Area:4.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	6.297E+04
	PB-210	6.300E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/23/14 15:19:11 Page: 10 **

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 2.44E-01 2.44E-01

Total 2.44E-01 2.44E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/23/14 15:19:11 Page: 11 **

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.39E-01	0.00E+00	0.00E+00	0.00E+00	4.43E-03	0.00E+00
Total	2.39E-01	0.00E+00	0.00E+00	0.00E+00	4.43E-03	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/23/14 15:19:11 Page: 12 **

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	2.43E-01	2.43E-01
PB-210	4.62E-05	4.62E-05
PB-210	9.72E-04	9.72E-04

Title : Default Case for RESRAD-BUILD

Input File : site1.bld

Full Summary

```
=====
=====
===
      RESRAD-BUILD Dose (Time) Tables
===
=====
```

Receptor Dose Received for the Exposure Duration

```
=====
=====
```

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

----- -----
1 3.70E-01 2.44E-01

Receptor Dose/Yr Averaged Over Exposure Duration

```
=====
=====
```

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

----- -----
1 3.71E-01 2.44E-01

Title : Parcel G Building 366 SU 11 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

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For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel G Building 366 SU 11 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld

=====
=====
===
== RESRAD-BUILD Input Parameters ==
===
=====
=====

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

===== Receptor Information =====

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m3/day]	Inhalation [m2/hr]	Ingestion(Dust)
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

== Receptor-Source Shielding Relationship ==

Receptor	Source	Density [g/cm3]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 3 **

Title : Parcel G Building 366 SU 11 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height [m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

* <=Q01: 1.95E+02

H1: 2.500 * Room 1 * Q10 : 1.95E+02

* LAMBDA: 8.00E-01 *

Area 97.620 *

* *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel G Building 366 SU 11 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:9.76E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	7.000E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	7.000E+04	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 5 **

Title : Parcel G Building 366 SU 11 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld

Evaluation Time: 0.0000000E+00 years

=====
=====
== Assessment for Time: 1 ==
== Time =0.00E+00 yr ==
=====
=====

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]
Geometry:: Type: Area Area:9.76E+01 [m2] Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 1.000E-01
Time to Remove: 3.650E+02 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
RA-226 7.000E+04
PB-210 7.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 6 **

Title : Parcel G Building 366 SU 11 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	3.33E+00	3.33E+00
Total	3.33E+00	3.33E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 7 **
Title : Parcel G Building 366 SU 11 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.55E-01	1.12E-02	9.13E-05	1.27E+00	9.43E-02	1.00E+00
Total	9.55E-01	1.12E-02	9.13E-05	1.27E+00	9.43E-02	1.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 8 **

Title : Parcel G Building 366 SU 11 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld
Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.76E+00	1.76E+00
PB-210	2.38E-02	2.38E-02
PB-210	1.55E+00	1.55E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 9 **

Title : Parcel G Building 366 SU 11 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld
Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00 yr      ====
=====
=====
```

```
=====  Source Information =====
```

Source: 1
Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]
Geometry:: Type: Area Area:9.76E+01 [m2] Direction: z
Pathway ::
 Direct Ingestion Rate: 0.000E+00 [1/hr]
 Fraction released to air: 1.000E-01
 Removable fraction: 0.000E+00
 Time to Remove: 3.650E+02 [day]

Contamination:: Nuclide Concentration
 [dpm/m2]
RA-226 6.297E+04
PB-210 6.300E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 10 **

Title : Parcel G Building 366 SU 11 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	9.94E-01	9.94E-01
Total	9.94E-01	9.94E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 11 **
Title : Parcel G Building 366 SU 11 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld
Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.05E-01	0.00E+00	0.00E+00	0.00E+00	8.93E-02	0.00E+00
Total	9.05E-01	0.00E+00	0.00E+00	0.00E+00	8.93E-02	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:51:29 Page: 12 **

Title : Parcel G Building 366 SU 11 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36611all.bld
Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	9.91E-01	9.91E-01
PB-210	1.51E-04	1.51E-04
PB-210	3.17E-03	3.17E-03

** RESRAD-BUILD Rose Program Output, Version 3.50 10/03/14 09:51:29 Page: 13 **

Title : Parcel G Building 366 SU 11 all surface

Final Summary

Receptor Dose Received for the Exposure Duration

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 3.33E+00 9.94E-01

Receptor Dose/Yr Averaged Over Exposure Duration

=====
=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 3.34E+00 9.95E-01

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

==

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Dose by Nuclide Detail.....	8
For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

```
=====
=====
=====  
===  
== RESRAD-BUILD Input Parameters ==  
===  
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

```
===== Receptor Information =====
```

Receptor	Room	x [m]	y [m]	z [m]	FracTime	Inhalation [m ³ /day]	Ingestion(Dust) [m ² /hr]
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

```
== Receptor-Source Shielding Relationship ==
```

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 3 **

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

* <=Q01: 1.95E+02

H1: 2.500 * Room 1 * Q10 : 1.95E+02

* LAMBDA: 8.00E-01 *

Area 97.620 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:4.90E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	7.000E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	7.000E+04	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 5 **

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time:  1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:4.90E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	7.000E+04
	PB-210	7.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 6 **

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 3.79E-01 3.79E-01

Total 3.79E-01 3.79E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 7 **
Title : Parcel G Building 366 SU 11 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.59E-01	5.64E-04	4.59E-06	6.37E-02	4.74E-03	5.04E-02
Total	2.59E-01	5.64E-04	4.59E-06	6.37E-02	4.74E-03	5.04E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 8 **
Title : Parcel G Building 366 SU 11 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld
Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	2.99E-01	2.99E-01
PB-210	1.21E-03	1.21E-03
PB-210	7.88E-02	7.88E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 9 **

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00  yr      ====
=====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:4.90E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	6.297E+04
	PB-210	6.300E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 10 **

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	2.50E-01	2.50E-01
Total	2.50E-01	2.50E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 11 **
Title : Parcel G Building 366 SU 11 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld
Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.46E-01	0.00E+00	0.00E+00	0.00E+00	4.48E-03	0.00E+00
Total	2.46E-01	0.00E+00	0.00E+00	0.00E+00	4.48E-03	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 12 **

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	2.49E-01	2.49E-01
PB-210	4.75E-05	4.75E-05
PB-210	9.97E-04	9.97E-04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:53:28 Page: 13 **

Title : Parcel G Building 366 SU 11 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36611between.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

----- -----

1 3.79E-01 2.50E-01

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

----- -----

1 3.79E-01 2.50E-01

ED_004747_00022189-00151

Title : Parcel G Building 366 SU 36 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

==

=====

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For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel G Building 366 SU 36 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

=====
=====
===
== RESRAD-BUILD Input Parameters ==
===
=====
=====

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

===== Receptor Information =====

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m3/day]	Inhalation [m2/hr]	Ingestion(Dust)
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

== Receptor-Source Shielding Relationship ==

Receptor	Source	Density [g/cm3]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 3 **

Title : Parcel G Building 366 SU 36 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

<=Q01: 2.26E+02

H1: 2.500 * Room 1 * Q10 : 2.26E+02

* LAMBDA: 8.00E-01 *

Area 113.000 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel G Building 366 SU 36 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:1.13E+02 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	7.000E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	7.000E+04	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 5 **

Title : Parcel G Building 366 SU 36 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time: 1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:1.13E+02 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	7.000E+04
	PB-210	7.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 6 **

Title : Parcel G Building 366 SU 36 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 3.37E+00 3.37E+00

Total 3.37E+00 3.37E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 7 **
Title : Parcel G Building 366 SU 36 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.94E-01	1.17E-02	9.13E-05	1.27E+00	9.43E-02	1.00E+00
Total	9.94E-01	1.17E-02	9.13E-05	1.27E+00	9.43E-02	1.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 8 **

Title : Parcel G Building 366 SU 36 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.80E+00	1.80E+00
PB-210	2.38E-02	2.38E-02
PB-210	1.55E+00	1.55E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 9 **

Title : Parcel G Building 366 SU 36 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

Evaluation Time: 1.00000000 years

```
=====
=====
== Assessment for Time: 2 ==
== Time =1.00E+00 yr ==
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]
Geometry:: Type: Area Area:1.13E+02 [m2] Direction: z
Pathway ::
Direct Ingestion Rate: 0.000E+00 [1/hr]
Fraction released to air: 1.000E-01
Removable fraction: 0.000E+00
Time to Remove: 3.650E+02 [day]

Contamination:: Nuclide Concentration
[dpm/m2]
RA-226 6.297E+04
PB-210 6.300E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 10 **

Title : Parcel G Building 366 SU 36 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\1

Source Contributions to Receptor Doses

[mrem]

	Source	Total
	1	
Receptor	1	1.03E+00
Total		1.03E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 11 **
Title : Parcel G Building 366 SU 36 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld
Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.42E-01	0.00E+00	0.00E+00	0.00E+00	8.93E-02	0.00E+00
Total	9.42E-01	0.00E+00	0.00E+00	0.00E+00	8.93E-02	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 12 **

Title : Parcel G Building 366 SU 36 all surface
Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld
Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.03E+00	1.03E+00
PB-210	1.56E-04	1.56E-04
PB-210	3.28E-03	3.28E-03

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:55:25 Page: 13 **

Title : Parcel G Building 366 SU 36 all surface

Input File : C:\RESRAD_Family\BUILD\3.5\36636all.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 3.37E+00 1.03E+00

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 3.38E+00 1.03E+00

ED_004747_00022189-00164

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

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Dose by Nuclide Detail.....	8
For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

```
=====
=====
=====  
===  
== RESRAD-BUILD Input Parameters ==  
===  
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

```
===== Receptor Information =====
```

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m3/day]	Inhalation [m2/hr]	Ingestion(Dust)
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

```
== Receptor-Source Shielding Relationship ==
```

Receptor	Source	Density [g/cm3]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 3 **

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

<=Q01: 2.26E+02

H1: 2.500 * Room 1 * Q10 : 2.26E+02

* LAMBDA: 8.00E-01 *

Area 113.000 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:5.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	7.000E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	7.000E+04	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 5 **

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time: 1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:5.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	7.000E+04
	PB-210	7.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 6 **

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 4.06E-01 4.06E-01

Total 4.06E-01 4.06E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 7 **
Title : Parcel G Building 366 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.86E-01	5.90E-04	4.61E-06	6.40E-02	4.76E-03	5.06E-02
Total	2.86E-01	5.90E-04	4.61E-06	6.40E-02	4.76E-03	5.06E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 8 **
Title : Parcel G Building 366 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld
Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	3.25E-01	3.25E-01
PB-210	1.22E-03	1.22E-03
PB-210	7.93E-02	7.93E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 9 **

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00  yr      ====
=====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:5.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	6.297E+04
	PB-210	6.300E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 10 **

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	2.75E-01	2.75E-01
Total	2.75E-01	2.75E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 11 **
Title : Parcel G Building 366 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld
Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.70E-01	0.00E+00	0.00E+00	0.00E+00	4.51E-03	0.00E+00
Total	2.70E-01	0.00E+00	0.00E+00	0.00E+00	4.51E-03	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 12 **
Title : Parcel G Building 366 SU 36 between syst
Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld
Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	2.74E-01	2.74E-01
PB-210	5.20E-05	5.20E-05
PB-210	1.09E-03	1.09E-03

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:56:56 Page: 13 **

Title : Parcel G Building 366 SU 36 between syst

Input File : C:\RESRAD_Family\BUILD\3.5\36636between.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 4.06E-01 2.75E-01

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 4.06E-01 2.75E-01

Title : Building 366 SU 67

Input File : site1.bld

ffffffffffii
ffffffffffii
iii iii
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iii iii
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Dose by Nuclide Detail.....	8
For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Building 366 SU 67

Input File : site1.bld

ffffffffffii
ffffffffffii
iii iii
iii RESRAD-BUILD Input Parameters iii
iii iii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
ffffffffffiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

ffffffffff Receptor Information ffffffii

Receptor	Room	x [m]	y [m]	z [m]	FracTime	Inhalation [m ³ /day]	Ingestion(Dust) [m ² /hr]
1	1	0.000	4.000	1.000	1.000	1.80E+01	1.00E-04

fff Receptor-Source Shielding Relationship fff

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

Title : Building 366 SU 67

Input File : site1.bld

iiiiiiii Building Information iiii

Building Air Exchange Rate: 8.00E-01 1/hr

Height [m] Air Exchanges [m³/hr]Area [m²]

* * *

* * *

<=Q01: 2.26E+02

H1: 2.500 * Room 1 * Q10 : 2.26E+02

* LAMBDA: 8.00E-01 *

Area 113.000 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:50:09 Page: 4 **

Title : Building 366 SU 67

Input File : sitel.bld

Source Information

Source: 1

Location:: Room : 1 x: 0.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:1.13E+02 [m²] Direction: 0

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

Ingestion Inhalation Submersion

[dpm/m²] [mrem/dpm] [mrem/dpm] [mrem/yr]

(dpm/m³)

RA-226 7.000E+04 5.950E-04 3.871E-03 4.663E-03

PB-210 7.000E+04 2.422E-03

Title : Building 366 SU 67

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

ff
ff
fff Assessment for Time: 1 fff
fff Time =0.00E+00 yr fff
ff
ff

fffff Source Information fffff

Source: 1

Location:: Room : 1 x: 0.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:1.13E+02 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	7.000E+04
	PB-210	7.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:50:09 Page: 6 **

Title : Building 366 SU 67

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

ff
ff
fff fff
fff RESRAD-BUILD Dose Tables fff
fff fff
ff
ff

Source Contributions to Receptor Doses

ffffffffffffffffffffffffffffffffffffff

[mrem]

Source Total

1

Receptor 1 3.37E+00 3.37E+00

Total 3.37E+00 3.37E+00

Title : Building 366 SU 67

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

ffffffffffffffffffffff

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.94E-01	1.17E-02	9.13E-05	1.27E+00	9.43E-02	1.00E+00
Total	9.94E-01	1.17E-02	9.13E-05	1.27E+00	9.43E-02	1.00E+00

Title : Building 366 SU 67

Input File : site1.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

ffffffffffffffffffffff

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226 1.80E+00 1.80E+00

PB-210 2.38E-02 2.38E-02

PB-210 1.55E+00 1.55E+00

Title : Building 366 SU 67

Input File : site1.bld

Evaluation Time: 1.00000000 years

ff
ff
fff Assessment for Time: 2 fff
fff Time =1.00E+00 yr fff
ff
ff

fffff Source Information fffff

Source: 1

Location:: Room : 1 x: 0.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:1.13E+02 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	6.297E+04
	PB-210	6.300E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:50:09 Page: 10 **

Title : Building 366 SU 67

Input File : site1.bld

Evaluation Time: 1.00000000 years

ff
ff
fff fff
fff RESRAD-BUILD Dose Tables fff
fff fff
ffffffffffffffffffffffffffffffffffffff
ffffffffffffffffffffffffffffffffffffff

Source Contributions to Receptor Doses

ffffffffffffffffffffffffffffffffffffff

[mrem]

Source Total

1

Receptor 1 1.03E+00 1.03E+00

Total 1.03E+00 1.03E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:50:09 Page: 11 **

Title : Building 366 SU 67

Input File : site1.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

ffffffffffffffffffffff

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	9.42E-01	0.00E+00	0.00E+00	0.00E+00	8.93E-02	0.00E+00
Total	9.42E-01	0.00E+00	0.00E+00	0.00E+00	8.93E-02	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:50:09 Page: 12 **

Title : Building 366 SU 67

Input File : site1.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

ffffffffffffffffffffff

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226 1.03E+00 1.03E+00

PB-210 1.56E-04 1.56E-04

PB-210 3.28E-03 3.28E-03

Title : Building 366 SU 67

Input File : site1.bld

Full Summary

ff
ff
fff fff
fff RESRAD-BUILD Dose (Time) Tables fff
fff fff
ff
ff

Receptor Dose Received for the Exposure Duration

ffffffffffffffffffffffffffffffffffffff
(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

AAAAAAA AAAAAAA

1 3.37E+00 1.03E+00

Receptor Dose/Yr Averaged Over Exposure Duration

ffffffffffffffffffffffffffffffffffffff
(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

AAAAAAA AAAAAAA

1 3.38E+00 1.03E+00

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

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For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
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Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

```
=====
=====
=====  
===  
== RESRAD-BUILD Input Parameters ==  
===  
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

```
===== Receptor Information =====
```

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m3/day]	Inhalation [m2/hr]	Ingestion(Dust)
1	1	0.000	4.000	1.000	1.000	1.80E+01	1.00E-04

```
== Receptor-Source Shielding Relationship ==
```

Receptor	Source	Density [g/cm3]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 3 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

<=Q01: 2.26E+02

H1: 2.500 * Room 1 * Q10 : 2.26E+02

* LAMBDA: 8.00E-01 *

Area 113.000 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 0.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:5.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	7.000E+04	5.950E-04	3.871E-03	4.663E-03
PB-210	7.000E+04	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 5 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time: 1      ====
====      Time =0.00E+00 yr      ====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 0.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:5.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	7.000E+04
	PB-210	7.000E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 6 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	4.06E-01	4.06E-01
Total	4.06E-01	4.06E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 7 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.86E-01	5.90E-04	4.61E-06	6.40E-02	4.76E-03	5.06E-02
Total	2.86E-01	5.90E-04	4.61E-06	6.40E-02	4.76E-03	5.06E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 8 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	3.25E-01	3.25E-01
PB-210	1.22E-03	1.22E-03
PB-210	7.93E-02	7.93E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 9 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time: 2      ====
====      Time =1.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 0.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:5.70E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	6.297E+04
	PB-210	6.300E+04

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 10 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	2.75E-01	2.75E-01
Total	2.75E-01	2.75E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 11 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.70E-01	0.00E+00	0.00E+00	0.00E+00	4.51E-03	0.00E+00
Total	2.70E-01	0.00E+00	0.00E+00	0.00E+00	4.51E-03	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 12 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	2.74E-01	2.74E-01
PB-210	5.20E-05	5.20E-05
PB-210	1.09E-03	1.09E-03

** RESRAD-BUILD Dose Program Output, Version 3.50 11/03/14 14:52:16 Page: 13 **

Title : Building 366 SU 67 Between Systematics

Input File : C:\RESRAD_Family\BUILD\3.5\366-67-between.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 4.06E-01 2.75E-01

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 4.06E-01 2.75E-01

Title : Parcel G Building 411 SU 1 all surfaces

Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

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For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld

=====
=====
===
== RESRAD-BUILD Input Parameters ==
===
=====
=====

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

===== Receptor Information =====

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m3/day]	Inhalation [m2/hr]	Ingestion(Dust)
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

== Receptor-Source Shielding Relationship ==

Receptor	Source	Density [g/cm3]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 3 **

Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height [m] Air Exchanges [m³/hr]

Area [m²]

* * *

* * *

<=Q01: 2.82E+03

H1: 2.500 * Room 1 * Q10 : 2.82E+03

* LAMBDA: 8.00E-01 *

Area1407.500 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]
Geometry:: Type: Area Area:1.41E+03 [m²] Direction: z
Pathway ::
 Direct Ingestion Rate: 0.000E+00 [1/hr]
 Fraction released to air: 1.000E-01
 Removable fraction: 1.000E-01
 Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m ²]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m ³)]
RA-226	2.300E+05	5.950E-04	3.871E-03	4.663E-03
PB-210	2.300E+05	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 5 **

Title : Parcel G Building 411 SU 1 all surfaces

Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time:  1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:1.41E+03 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	2.300E+05
	PB-210	2.300E+05

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 6 **

Title : Parcel G Building 411 SU 1 all surfaces

Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 1.34E+01 1.34E+01

Total 1.34E+01 1.34E+01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 7 **

Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	5.51E+00	6.48E-02	3.00E-04	4.17E+00	3.10E-01	3.30E+00
Total	5.51E+00	6.48E-02	3.00E-04	4.17E+00	3.10E-01	3.30E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 8 **
Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld
Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide	Receptor	Total
	1	
RA-226	8.17E+00	8.17E+00
PB-210	7.83E-02	7.83E-02
PB-210	5.10E+00	5.10E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 9 **

Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld
Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00 yr      ====
=====
=====
```

```
=====  Source Information =====
```

Source: 1
Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]
Geometry:: Type: Area Area:1.41E+03 [m2] Direction: z
Pathway ::
 Direct Ingestion Rate: 0.000E+00 [1/hr]
 Fraction released to air: 1.000E-01
 Removable fraction: 0.000E+00
 Time to Remove: 3.650E+02 [day]

Contamination:: Nuclide Concentration
 [dpm/m2]
RA-226 2.069E+05
PB-210 2.070E+05

```
** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 10 **
Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\411all.bld
Evaluation Time: 1.00000000 years
```

Source Contributions to Receptor Doses

[mrem]

	Source	Total
	1	
Receptor	1	5.51E+00
Total		5.51E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 11 **
Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld
Evaluation Time: 1.00000000 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	5.22E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-01	0.00E+00
Total	5.22E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-01	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 12 **

Title : Parcel G Building 411 SU 1 all surfaces
Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld
Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	5.49E+00	5.49E+00
PB-210	8.27E-04	8.27E-04
PB-210	1.74E-02	1.74E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 09:59:13 Page: 13 **

Title : Parcel G Building 411 SU 1 all surfaces

Input File : C:\RESRAD_Family\BUILD\3.5\4111all.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

----- -----

1 1.34E+01 5.51E+00

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

----- -----

1 1.34E+01 5.52E+00

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

=====

=====

==

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For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

```
=====
=====
==== RESRAD-BUILD Input Parameters ====
=====
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

===== Receptor Information =====

Receptor	Room	x [m]	y [m]	z [m]	FracTime	Inhalation [m ³ /day]	Ingestion(Dust) [m ² /hr]
1	1	4.000	4.000	1.000	1.000	1.80E+01	1.00E-04

==== Receptor-Source Shielding Relationship ===

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]Area [m²]

* * *

* * *

<=Q01: 2.82E+03

H1: 2.500 * Room 1 * Q10 : 2.82E+03

* LAMBDA: 8.00E-01 *

Area1407.500 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00[m]

Geometry:: Type: Area Area:4.69E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	2.300E+05	5.950E-04	3.871E-03	4.663E-03
PB-210	2.300E+05	2.422E-03	6.214E-03	4.698E-06

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 5 **

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time:  1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:4.69E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	2.300E+05
	PB-210	2.300E+05

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 6 **

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

Source Total

1

Receptor 1 2.77E+00 2.77E+00

Total 2.77E+00 2.77E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 7 **
Title : Parcel G Building 411 SU 1 between syste
Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld
Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

===== [mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.51E+00	2.16E-03	1.00E-05	1.39E-01	1.03E-02	1.10E-01
Total	2.51E+00	2.16E-03	1.00E-05	1.39E-01	1.03E-02	1.10E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 8 **
Title : Parcel G Building 411 SU 1 between syste
Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld
Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide	Receptor	Total
	1	
RA-226	2.59E+00	2.59E+00
PB-210	2.74E-03	2.74E-03
PB-210	1.79E-01	1.79E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 9 **

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 4.00 y: 4.00 z: 0.00 [m]

Geometry:: Type: Area Area:4.69E+01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	2.069E+05
	PB-210	2.070E+05

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 10 **
Title : Parcel G Building 411 SU 1 between syste
Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld
Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables ==
==
=====

=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	2.38E+00	2.38E+00
Total	2.38E+00	2.38E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 11 **

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.37E+00	0.00E+00	0.00E+00	0.00E+00	9.78E-03	0.00E+00
Total	2.37E+00	0.00E+00	0.00E+00	0.00E+00	9.78E-03	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 12 **
Title : Parcel G Building 411 SU 1 between syste
Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld
Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide	Receptor	Total
	1	
RA-226	2.38E+00	2.38E+00
PB-210	4.11E-04	4.11E-04
PB-210	8.63E-03	8.63E-03

** RESRAD-BUILD Dose Program Output, Version 3.50 10/03/14 10:00:19 Page: 13 **

Title : Parcel G Building 411 SU 1 between syste

Input File : C:\RESRAD_Family\BUILD\3.5\4111between.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 2.77E+00 2.38E+00

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 2.77E+00 2.39E+00

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

==

=====

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RESRAD-BUILD Input Parameters.....	2
Building Information.....	3
Source Information.....	4
For time = 0.00E+00 yr	
Time Specific Parameters.....	5
Receptor-Source Dose Summary.....	6
Dose by Pathway Detail.....	7
Dose by Nuclide Detail.....	8
For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

```
=====
=====
==== RESRAD-BUILD Input Parameters ====
=====
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

```
===== Receptor Information =====
```

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m ³ /day]	Inhalation [m ² /hr]	Ingestion(Dust)
1	1	1.000	2.000	1.000	1.000	1.80E+01	1.00E-04

```
==== Receptor-Source Shielding Relationship ===
```

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]Area [m²]

```
*****  
*          *  
*          *  
*          <=Q01: 4.00E+00  
H1: 2.500 *      Room 1      *      Q10 : 4.00E+00  
*      LAMBDA: 8.00E-01      *  
Area 2.000 *          *  
*          *  
*****
```

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 1.00 y: 2.00 z: 0.00[m]

Geometry:: Type: Area Area:1.00E-01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	2.230E+05	5.950E-04	3.871E-03	4.663E-03
PB-210	2.230E+05	2.422E-03	6.214E-03	4.698E-06

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time:  1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 1.00 y: 2.00 z: 0.00 [m]
Geometry:: Type: Area Area:1.00E-01 [m²] Direction: z
Pathway ::
 Direct Ingestion Rate: 0.000E+00 [1/hr]
 Fraction released to air: 1.000E-01
 Removable fraction: 1.000E-01
 Time to Remove: 3.650E+02 [day]

Contamination:: Nuclide Concentration
 [dpm/m²]
RA-226 2.230E+05
PB-210 2.230E+05

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:45:26 Page: 6 **

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	4.05E-01	4.05E-01
Total	4.05E-01	4.05E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:45:26 Page: 7 **

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.76E-02	2.55E-04	1.46E-05	2.02E-01	1.50E-02	1.60E-01
Total	2.76E-02	2.55E-04	1.46E-05	2.02E-01	1.50E-02	1.60E-01

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:45:26 Page: 8 **

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.54E-01	1.54E-01
PB-210	3.78E-03	3.78E-03
PB-210	2.47E-01	2.47E-01

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00 yr      ====
=====
```

```
=====  Source Information =====
```

Source: 1

Location:: Room : 1 x: 1.00 y: 2.00 z: 0.00 [m]

Geometry:: Type: Area Area:1.00E-01 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	2.006E+05
	PB-210	2.007E+05

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:45:26 Page: 10 **

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	4.03E-02	4.03E-02
Total	4.03E-02	4.03E-02

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:45:26 Page: 11 **

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	2.61E-02	0.00E+00	0.00E+00	0.00E+00	1.42E-02	0.00E+00
Total	2.61E-02	0.00E+00	0.00E+00	0.00E+00	1.42E-02	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:45:26 Page: 12 **

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	4.02E-02	4.02E-02
PB-210	5.29E-06	5.29E-06
PB-210	1.11E-04	1.11E-04

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:45:26 Page: 13 **

Title : Worst Case Small Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-small.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 4.05E-01 4.03E-02

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

1 4.05E-01 4.04E-02

ED_004747_00022189-00243

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

=====

=====

==

== RESRAD-BUILD Table of Contents ==

==

=====

=====

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Time Specific Parameters.....	5
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Dose by Pathway Detail.....	7
Dose by Nuclide Detail.....	8
For time = 1.00E+00 yr	
Time Specific Parameters.....	9
Receptor-Source Dose Summary.....	10
Dose by Pathway Detail.....	11
Dose by Nuclide Detail.....	12
Full Summary.....	13

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

```
=====
=====
==== RESRAD-BUILD Input Parameters ====
=====
=====
```

Number of Sources : 1
Number of Receptors: 1
Total Time : 3.650000E+02 days
Fraction Inside : 5.000000E-01

```
===== Receptor Information =====
```

Receptor	Room	x [m]	y [m]	z [m]	FracTime [m ³ /day]	Inhalation [m ² /hr]	Ingestion(Dust)
1	1	1.000	2.000	1.000	1.000	1.80E+01	1.00E-04

```
==== Receptor-Source Shielding Relationship ===
```

Receptor	Source	Density [g/cm ³]	Thickness [cm]	Material
1	1	2.40E+00	0.00E+00	Concrete

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

===== Building Information =====

Building Air Exchange Rate: 8.00E-01 1/hr

Height[m] Air Exchanges [m³/hr]Area [m²]

* * *

* * *

<=Q01: 2.00E+02

H1: 2.500 * Room 1 * Q10 : 2.00E+02

* LAMBDA: 8.00E-01 *

Area 100.000 *

* * *

Deposition velocity: 1.00E-02 [m/s] Resuspension Rate: 5.00E-07 [1/s]

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

===== Source Information =====

Source: 1

Location:: Room : 1 x: 1.00 y: 2.00 z: 0.00[m]

Geometry:: Type: Area Area:9.00E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Radon Release Fraction: 1.000E-01

Contamination::

Nuclide Concentration Dose Conversion Factor (Library: FGR 11)

		Ingestion	Inhalation	Submersion
	[dpm/m2]	[mrem/dpm]	[mrem/dpm]	[mrem/yr/ (dpm/m3)]
RA-226	2.230E+05	5.950E-04	3.871E-03	4.663E-03
PB-210	2.230E+05	2.422E-03	6.214E-03	4.698E-06

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Evaluation Time: 0.0000000E+00 years

```
=====
=====
====      Assessment for Time:  1      ====
====      Time =0.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 1.00 y: 2.00 z: 0.00 [m]

Geometry:: Type: Area Area:9.00E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 1.000E-01

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	2.230E+05
	PB-210	2.230E+05

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:43:20 Page: 6 **

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Evaluation Time: 0.0000000E+00 years

=====

=====
==
== RESRAD-BUILD Dose Tables
==
=====
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	1.87E+00	1.87E+00
Total	1.87E+00	1.87E+00

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Evaluation Time: 0.0000000E+00 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.19E+00	3.24E-03	2.62E-05	3.64E-01	2.70E-02	2.88E-01
Total	1.19E+00	3.24E-03	2.62E-05	3.64E-01	2.70E-02	2.88E-01

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Evaluation Time: 0.0000000E+00 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.41E+00	1.41E+00
PB-210	6.88E-03	6.88E-03
PB-210	4.49E-01	4.49E-01

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Evaluation Time: 1.00000000 years

```
=====
=====
====      Assessment for Time:  2      ====
====      Time =1.00E+00 yr      ====
=====
=====
```

```
===== Source Information =====
```

Source: 1

Location:: Room : 1 x: 1.00 y: 2.00 z: 0.00 [m]

Geometry:: Type: Area Area:9.00E+00 [m2] Direction: z

Pathway ::

Direct Ingestion Rate: 0.000E+00 [1/hr]

Fraction released to air: 1.000E-01

Removable fraction: 0.000E+00

Time to Remove: 3.650E+02 [day]

Contamination::	Nuclide	Concentration
		[dpm/m2]
	RA-226	2.006E+05
	PB-210	2.007E+05

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:43:20 Page: 10 **

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Evaluation Time: 1.00000000 years

=====

=====
==
== RESRAD-BUILD Dose Tables ==
==
=====

Source Contributions to Receptor Doses

=====

[mrem]

	Source	Total
	1	
Receptor 1	1.15E+00	1.15E+00
Total	1.15E+00	1.15E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:43:20 Page: 11 **

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Evaluation Time: 1.00000000 years

Pathway Detail of Doses

=====

[mrem]

Source: 1

Receptor	External	Deposition	Immersion	Inhalation	Radon	Ingestion
1	1.13E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-02	0.00E+00
Total	1.13E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-02	0.00E+00

** RESRAD-BUILD Dose Program Output, Version 3.50 10/27/14 07:43:20 Page: 12 **

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Evaluation Time: 1.00000000 years

Nuclide Detail of Doses

=====

[mrem]

Source: 1

Nuclide Receptor Total

1

RA-226	1.15E+00	1.15E+00
PB-210	2.12E-04	2.12E-04
PB-210	4.46E-03	4.46E-03

Title : Worst Case scenario Large Room

Input File : C:\RESRAD_Family\BUILD\3.5\worst-case-large.bld

Full Summary

=====

=====
==
== RESRAD-BUILD Dose (Time) Tables ==
==
=====

=====

Receptor Dose Received for the Exposure Duration

=====

(mrem)

Evaluation Time [yr]

0.00E+00 1.00E+00

----- -----

1 1.87E+00 1.15E+00

Receptor Dose/Yr Averaged Over Exposure Duration

=====

(mrem/yr)

Evaluation Time [yr]

0.00E+00 1.00E+00

----- -----

1 1.87E+00 1.15E+00

APPENDIX C

RASO GUIDANCE

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RASO GUIDANCE DOCUMENT

Conducting Alpha Scans for Radium

17 Dec 2013

Provided is guidance to be utilized in development of procedures for conducting alpha scan surveys for radium-226 at Navy sites. The purpose of performing alpha scans is to locate areas with elevated activities or hot spots that may require further investigation or action. Final release decisions will be based on evaluation of the static and bias sample locations as they compare with the reference area.

This guidance assumes the reader is very familiar with the following reference documents from which this guidance is established.

- Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM, NUREG 1575, Rev 1)
- A Nonparametric Statistical Methodology for the Design and Analysis of Final Status Decommissioning Surveys (NUREG 1505, Rev 1)
- Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions (NUREG 1507)
- Evaluation of Surface Contamination - Part 1 Beta Emitters (greater than 0.15 MeV) and Alpha Emitters (ISO 7503-1)
- Decommissioning Health Physics (Abelquist 2001)

Typically, for alpha scanning Equation 1 is not practical to determine an alpha scan MDC.

$$\frac{1}{\sqrt{p}} \quad \text{Equation 1}$$

Instead, when scanning for alpha contamination, Equations 2 and 3 are used to determine the probability of detecting an area of contamination at a predetermined activity, for a given scan rate or resident time, and certain amount of background activity.

$$P(n=1) = \frac{1}{\sqrt{p}} \quad \text{Equation 2}$$

$$P(n=2) = \left(1 - \frac{(G-B)t}{\sqrt{p}}\right) \left(e^{-\frac{(G-B)t}{\sqrt{p}}} \right) \quad \text{Equation 3}$$

Where:

P	Probability of detecting a count (n)
B	background count rate
G	hot spot activity
e_i	detector efficiency
e_s	surface efficiency
d	width of detector
v	scan speed
t	resident time (d/v)



RASO GUIDANCE DOCUMENT

Conducting Alpha Scans for Radium

17 Dec 2013

Using Equations 2 or 3, a probability of detection should be as close as practicable to 90%, but shall not be lower than 68%. Equation 3 is more practical to use when the background activity is greater than 5 cpm. The hot spot activity (G) will be derived from Table 1 of Regulatory Guide 1.86. Use the “average” surface activity level of 100 dpm as a starting point, not to exceed the “maximum” activity level of 300 dpm. There will be a trade-off for using a surface activity level of greater than 100 dpm, which will be discussed below. Next, select a scan speed (v) that will provide the best probability to detect. Obviously slower scan speed can provide greater resident times and improve the detection probability, but there are limits to how slowly an individual can scan. “Human factors suggest that, if a hot spot was not detected during 5 or 6 s of scanning over an elevated area, another several seconds added to the observation interval does not improve the scan sensitivity (Abelquist 2001).” Therefore, use the best probability equation and the most practical surface activity level to optimize a reasonable scan speed or resident time.

Regarding the detector efficiency in Equations 2 and 3, the dectector selection can positively improve the detector’s efficiency. But, the detector efficiency cannot be improved by taking advantage of the additional alpha radiations from the Ra-226 progeny, unless there is proof the progeny exist. The surface efficiency in Equations 2 and 3, will be 0.25.

During alpha scanning if the surveyor determines there is a detection that warrants the individual to stop and verify the detection, the surveyor will pause over the location for the resident time (d/v) that was used in Equation 2 or 3. If the detection event(s) is confirmed, the surveyor can take a bias static measurement to confirm the activity level is below the 100 dpm/100 cm², or mark the location and return later to investigate.

If a surface activity level of greater than 100 dpm is used to calculate the alpha scan “probability to detect,” in Equations 2 and 3, then the number (density) of systematic samples will also be increased. The magnitude of the increase will be based on the ratio of the “average” surface activity level of 100 dpm and the surface activity level use, not to exceed the maximum of 300 dpm. For example, if surface activity used during the alpha scan was 200, the ratio would be $200/100 = 2$. Thus, the number of systematic samples initially determine for the survey unit would be doubled.

When analyzing the alpha scan data, use RESRAD-BUILD to calculate the maximum potential dose from the survey unit based on the largest unsampled area between systematic sample points with the maximum allowable source activity averaged over that area. In addition, calculate the actual risk and dose for the entire survey unit based on the mean of the systematic readings to be utilized as the final risk/dose reported for the survey unit.

**APPENDIX D
EMPIRICAL STUDY
(on CD only)**

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1.0 INTRODUCTION

On January 24, 2014 and February 5, 2014, Tetra Tech EC, Inc. (TtEC) performed an empirical study to determine the effect of varying scan intervals or speed on the probability of detecting actual levels of contamination. This study was performed on distinct areas of contamination identified within Building 253 at Hunters Point Naval Shipyard, San Francisco, California.

1.1 Alpha Scan Process

According to Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), a manual developed by the Department of Defense, the alpha scan process consists of two stages: continuous monitoring and stationary sampling or pausing. During the continuous monitoring stage, the surveyor listens to the number of counts per time interval set on the detector. If alpha backgrounds are on the order of 0 to 3 counts per minute (cpm), a single count gives the surveyor sufficient cause to stop and investigate further by pausing for an additional number of seconds. For background count rates on the order of 5 to 10 cpm, a single count should not cause a surveyor to investigate further, primarily because there would be an inordinate number of false positives. For these types of instruments, the surveyor should expect at least 2 counts per time interval while passing over the source area before stopping for further investigation. The probability of detecting given levels of alpha surface contamination can be calculated by use of Poisson summation statistics.

2.0 EMPIRICAL STUDY

This empirical study was performed to determine the effect of varying scan intervals or speed on the probability of detecting actual levels of contamination. All measurements provided in this empirical study were collected with a Ludlum Model 2360 survey meter equipped with a Ludlum 43-37-1 gas flow proportional detector. Instrumentation was sourced-check daily and was found to be within the \pm 20 percent criteria, established when setting up initial baseline information, prior to collecting measurements. Appendix D.a provides the calibration certificate specific to the instrumentation utilized.

2.1 Backgrounds Measurements

Background measurements were collected on a concrete surface within Building 400 with a Ludlum Model 2360 survey meter equipped with a Ludlum 43-37-1 gas flow proportional detector. The average alpha background value of 8.8 cpm was determined by performing 20 measurements at random locations within Building 400. Background measurements can be found in Appendix D.b.

2.2 Determining Activity Concentrations

Activity concentrations for each location were determined by taking 20 individual 1-minute alpha and beta statics to determine a separate, empirical mean alpha and beta contamination level. Results were

converted to disintegrations per minute (dpm)/100 square centimeters (cm^2). These locations (A, B, and C) yielded the following results:

- Area A – 79 dpm/100 cm^2 alpha and 1,949 dpm/100 cm^2 beta
- Area B – 96 dpm/100 cm^2 alpha and 3,124 dpm/100 cm^2 beta
- Area C – 289 dpm/100 cm^2 alpha and 3,288 dpm/100 cm^2 beta

Measurements for determining the activity concentrations at each location can be found in Appendix D.c.

2.3 Time Interval and Scan Speed

The Ludlum Model 2360 was used to set time intervals between 1 to 4 seconds to simulate varying scan speeds. The Ludlum Model 43-37-1 gas flow proportional detector has a width of 15.9 (approximately 16) centimeters (cm) in the direction of scanning. A detector that is traveling at 16 cm/second (s) would only be exposed to a source area for 1 second. By setting the time interval of the Ludlum Model 2360 survey meter to 1 second, this simulates the detector moving over the source area at 16 cm/s. Time intervals ranging between 1 to 4 seconds correspond to the following scan rates when using a Ludlum Model 43-37-1 detector.

- 1-second scan interval – 16 cm/s scan rate
- 2-second scan interval – 8 cm/s scan rate
- 3-second scan interval – 5.3 cm/s scan rate
- 4-second scan interval – 4 cm/s scan rate

2.4 Probability of Detecting 2 or More Counts Per Interval

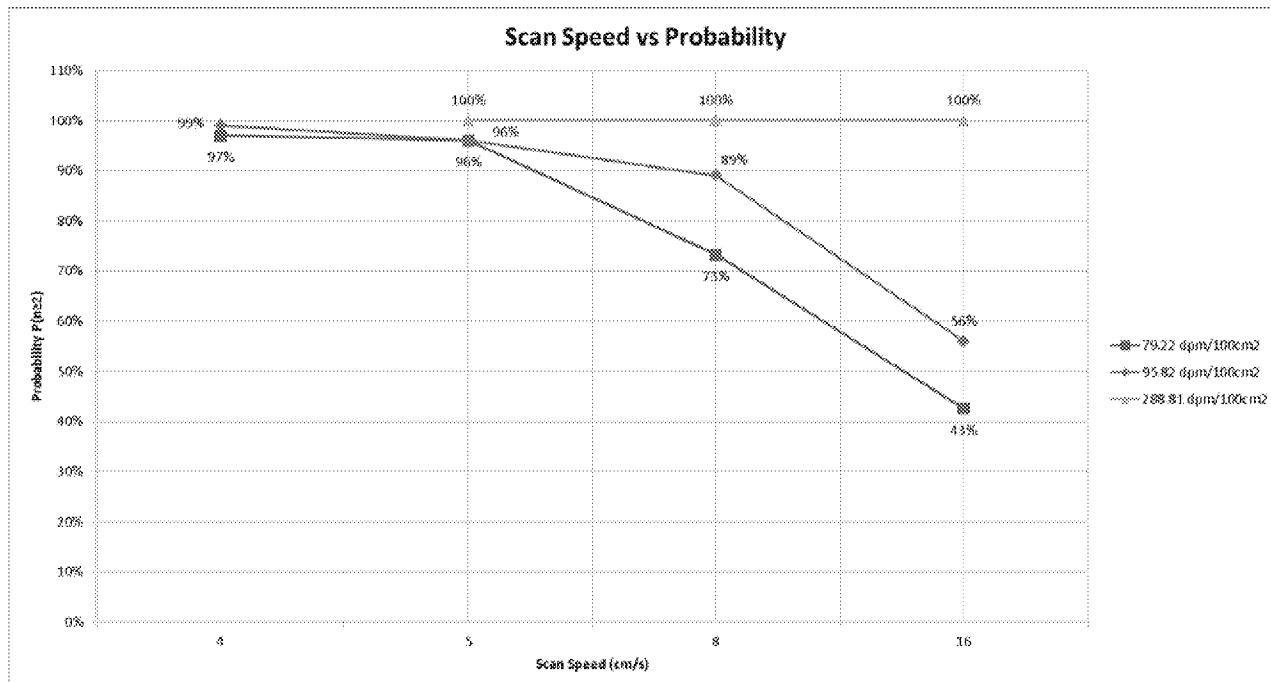
As stated in Section 1.0, MARSSIM recommends detecting at least 2 counts per time interval while passing over the source area before stopping for further investigation, if using instrumentation with background count rates on the order of 5 to 10 cpm. The Ludlum Model 2360 survey meter was set in scalar mode to measure the number of counts within the given time interval. At each location (A, B, and C), a minimum of 100 measurements were collected to determine whether instrumentation was able to identify 2 or more counts per time interval. The number of measurements that were able to identify 2 or more counts was divided by the total number of measurements collected to determine the empirical probability of detecting contamination at each of the locations. Logged measurements for each location and time interval can be found in Appendix D.d. Table 2-1 and Figure 2-1 summarize the results of this empirical study.

TABLE 2-1
EMPIRICAL SCAN SPEED VS PROBABILITY

Scan Speed (cm/s)		4	5	8	16
P($n \geq 2$)	79.22 dpm/100cm ² %	97%	96%	73%	43%
	95.82 dpm/100cm ² %	99%	96%	89%	56%
	288.81 dpm/100cm ² %			100%	100%

Measurements not collected

FIGURE 2-1
SCAN SPEED VS PROBABILITY



3.0 MARSSIM P($N \geq 2$)

MARSSIM recommends determining the probability of detecting an area of contamination at a predetermined level for given scan rates. For detectors with background count rates on the order of 5 to 10 cpm, the surveyor should expect at least 2 counts per time interval while passing over the source area before stopping for further investigation. The probability of detecting two or more counts of a known activity over a given time interval is provided in Equation 6-14 of MARSSIM.

Equation 6-14 from MARSSIM

$$P(n \geq 2) = 1 - \left[1 + \frac{(GE + B)t}{60} \right] \left[e^{-\frac{(GE + B)t}{60}} \right]$$

Utilizing values from the empirical study:

$P(n \geq 2)$	=	probability of detecting two or more counts during the time interval t (%)
t	=	time interval (s) = 3
G	=	contamination activity (dpm) = 288.81
E	=	detector efficiency (4π) = 0.1386
B	=	observed background count rate (cpm) = 8.8

The probability of detecting 2 or more counts at a scan speed of 5.3 cm/s would be 70.06 percent. Table 3-1 summarizes the calculated probability of detecting 2 or more counts for each empirical study scenario.

**TABLE 3-1
THEORETICAL SCAN SPEED VS PROBABILITY**

Scan Speed (cm/s)		4	5	8	16
$P(n \geq 2)$	79.22 dpm/100cm ² %	38%	26%	14%	4%
	95.82 dpm/100cm ² %	43%	30%	17%	5%
	288.81 dpm/100cm ² %	84%	70%	48%	20%

4.0 CONCLUSION

Results from the empirical study indicate a 100 percent probability of detecting two or more counts per time interval for 289 dpm/100 cm² at 16 cm/s. Results also indicate an activity of 96 dpm/100 cm² would have a detection probability of 89 percent at a scan speed of 8 cm/s and 99 percent at a scan speed of 4 cm/s. These empirical results show that small areas of slightly elevated alpha contamination can be identified at faster scan speeds. However, these results differ greatly once compared to the calculated probability when using Equation 6-14 from MARSSIM.

A possible explanation for this difference is that if the source area has a different geometry than the detector, the activity is averaged out over the entire area of the probe when converting to a smaller area of 100 cm². This may result in reporting a lower activity than may actually be present. Another possible explanation is that the concrete floor contributes additional background counts that register frequently enough to cause 2 counts within a scan time interval, as the background count rate is not subtracted during the scan process. Yet another possible explanation is that the addition of radium progeny may contribute to the observed alpha count rate.

Appendix D.a
Calibration Certificate

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Safety and Ecology Corporation

SEC PROCEDURE # SEC-IS-418 Rev 2

2800 Solway Road

Knoxville, TN 37931

Page 1 of 1

Calibration Certificate

10/31/2013

Calibration Certificate for 2360, Serial # 170550, Bar Code #, Property # SEC-5079

Date: 10/31/13

Date Last Cal. Expires: 10/07/14

Technician: Carl Hall

Location: 9999,

Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL: 500-2 SERIAL #: 132896 CAL DUE: 12/20/13

MODEL: SERIAL #: CAL DUE:

AS FOUND DATA		Geotropism: SAT		AS FOUND Instrument Condition: SAT		AS LEFT Instrument Condition: SAT	
<input checked="" type="checkbox"/> New Batteries?		Battery Check: SAT		AS FOUND Mechanical Zero: 0		AS LEFT Mechanical Zero: 0	
HIGH VOLTAGE		AS FOUND HV		AS LEFT HV		WINDOW SETTINGS	
(+/- 10% tolerance)		500 V:	494 V	AF V		BT (4 mV +/- .4 mV):	4.0 mV AF mV
		1000 V:	998 V	AF V		BW (40 mV +/- 4 mV):	40.0 mV AF mV
		1500 V:	1498 V	AF V			
		AF HV Setting:	1725 V	AL HV Setting:	1725 V	AT (120 mV +/- 10 mV):	120 mV AF mV

RATE METER

SCALE	RATE CPM	AS FOUND	% ERROR	AS LEFT	% ERROR
x1 or x1	100	100	0.00%	AF	0.00%
	250	250	0.00%	AF	0.00%
	400	400	0.00%	AF	0.00%
x1 or x10	1000	1000	0.00%	AF	0.00%
	2500	2500	0.00%	AF	0.00%
	4000	4000	0.00%	AF	0.00%
x10 or x100	10K	10	0.00%	AF	0.00%
	25K	25	0.00%	AF	0.00%
	40K	40	0.00%	AF	0.00%
x100 or x1000	100K	100	0.00%	AF	0.00%
	250K	250	0.00%	AF	0.00%
	400K	400	0.00%	AF	0.00%

DIGITAL SCALER

AF 250:	250	% ERR: 0.00%	AL 250:	AF	% ERR: 0.00%
AF 2500:	2503	% ERR: 0.12%	AL 2500:	AF	% ERR: 0.12%
AF 25K:	25.03 K	% ERR: 0.12%	AL 25K:	AF K	% ERR: 0.12%
AF 250K:	250.3 K	% ERR: 0.12%	AL 250K:	AF K	% ERR: 0.12%

 Is the As Found Data Within 20% of the Set Point?

REPRODUCIBILITY

x1 or x1 Scale:	250	250	250
x1 or x10 Scale:	2500	2500	2500
x10 or x100 Scale:	25 K	25 K	25 K
x100 or x1000 Scale:	250 K	250 K	250 K

 Are the Individual Counts Within 10% of the Average?

Audio Response: SAT

Overload Light: SAT

Low Battery (2.2V): SAT

Comments: Married as a set with: Model: 43-37-1 Serial #: PR259772 Bar Code #:

 Does Instrument Meet Final Acceptance Criteria? Calibration Sticker Attached?

Date Instrument is Due For Next Calibration:

10/31/14

Performed by:

Reviewed by:

Date: 10/31/13

Printed Name: Carl Hall



Calibration Certificate for 43-37-1, Serial # PR259772, Bar Code # , Property # SEC-6521

Date: 10/31/13

Date Last Cal. Expires: 09/12/14

Technician: Carl Hall

Location: 9999,

Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL : 2360

SERIAL #: 170550

CAL DUE: 10/23/14

NIST TRACEABLE SOURCES USED	SOURCE	ISOTOPE	ACTIVITY	2π	ASSAY DATE
<u>Efficiencies from last calibration</u>					
Pu:	5744-06	Sr-90	18100 dpm	12,700 cpm	12/27/2012
Tc:	5746-06	Tc-99	31900 dpm	20,000 cpm	12/27/2012
Th:	5747-06	Pu-239	25800 dpm	13,100 cpm	12/27/2012
SrY:	5748-06	Th-230	34900 dpm	17,700 cpm	12/27/2012

AS FOUND Instrument Condition: SAT					AS LEFT Instrument Condition: SAT					
AS FOUND DATA			Calibration Setpoints		AS LEFT DATA after repair, HV adjust or Plateau					
			HV : 1725 V							
Threshold Beta:	4	- 40	mV Alpha:	120 mV		HV :	1725	V		
Back ground:	7	CPM	Beta	AF Efficiencies		Back	Alpha	Beta	AL Efficiencies	
Pu-239:	5249	CPM	982	CPM	A-B XTLK	ground:	7	CPM	A-B XTLK	
Tc-99:	21	CPM	1312	CPM	20.32%	Pu-239:	5249	CPM	20.32%	
Th-230:	6822	CPM	7498	CPM	20.43%	Tc-99:	21	CPM	20.43%	
SrY-90:	N/A		N/A		19.53%	Th-230:	9822	CPM	28.12%	
			7461	CPM	35.80%	SrY-90:	N/A	CPM	35.80%	

Reproducibility : Isotope: Sr-90 7433 7502 7474 Average: 7469.7 Are the individual counts within 10% of the average?

If the As Found data (even after repair) is within 10% of the last calibration and the B-A Xtalk is <1% and the A-B Xtalk is <10%, then the technician may N/A the Plateau Data and go directly to Comments. Geometry of source = flush to surface, except gas proportional probes = 1/8" from surface unless otherwise specified.

2 Pi Efficiencies:

<u>Pu-239</u>	<u>Tc-99</u>	<u>Th-230</u>	<u>SrY-90</u>
40.02%	32.58%	55.45%	51.02%

Comments: Married as a set with: Model: 2260

Serial #: 170550

Barcode #

Does Instrument Meet Final Acceptance Criteria?

Calibration Sticker Attached?

Date Instrument Is Due For Next Calibration:

10/31/14

Performed by:

Date instrument

Reviewed by

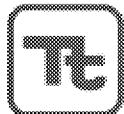
Date: 10-31-17

Printed Name: Carl Hall

Appendix D.b

Background Measurements

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TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Alpha/Beta Instrument and Reference Area Background Report

2360 Identification #: 886

Alpha Efficiency (2pi / Th230): 55.45%

Instrument/Probe Type: 2360 / 43-37-1

Total Alpha Efficiency: 13.86%

Instrument Serial #: 170550

Beta Efficiency (2pi / SrY90): 51.02%

Probe Serial #: 259772

Total Beta Efficiency: 12.76%

Calibration Due Date: 10/31/2014

Probe Active Area: 821 cm²

Reference Area Background Identification #: 886-400F1A

Count Time (minutes) 2.00

Rdg #	Date	Time	Alpha CPM	Beta CPM
1	11/7/2013	10:06:50 AM	9.5	1268.5
2	11/7/2013	10:09:10 AM	9.5	1296
3	11/7/2013	10:11:28 AM	8.5	1349.5
4	11/7/2013	10:13:57 AM	9.5	1325
5	11/7/2013	10:16:30 AM	8	1305
6	11/7/2013	10:18:43 AM	6	1298
7	11/7/2013	10:21:07 AM	9.5	1285
8	11/7/2013	10:23:32 AM	5.5	1320.5
9	11/7/2013	10:25:58 AM	14	1301.5
10	11/7/2013	10:28:20 AM	7	1312
11	11/7/2013	10:30:34 AM	9	1301.5
12	11/7/2013	10:32:55 AM	9	1335
13	11/7/2013	10:35:17 AM	8.5	1369
14	11/7/2013	10:37:32 AM	9.5	1341
15	11/7/2013	10:39:54 AM	10	1298
16	11/7/2013	10:42:13 AM	9.5	1371
17	11/7/2013	10:44:32 AM	6.5	1338
18	11/7/2013	10:46:49 AM	10.5	1316
19	11/7/2013	10:50:01 AM	7	1325.5
20	11/7/2013	10:52:51 AM	9.5	1389

Alpha Background (cpm): 8.80 Beta Background (cpm): 1322.25

Alpha Background (dpm/100cm²): 8 Beta Background (dpm/100cm²): 1263

Alpha MDC (dpm/100cm²): 10 Beta MDC (dpm/100cm²): 116

Alpha Investigation Level (cpm): 111 Beta Investigation Level (cpm): 2265

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Appendix D.c

Measurements for Determining Activity Concentrations

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Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM	
01/24/2014	14:11:23	Test	Test	23	24	108	2105	1 C1		Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2105	783	747.7185274
01/24/2014	14:10:23	Test	Test	22	23	90	2132	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2132	810	773.5019249
01/24/2014	14:09:23	Test	Test	21	22	91	2050	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2050	728	695.1967918
01/24/2014	14:08:22	Test	Test	20	21	76	2037	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2037	715	682.7825634
01/24/2014	14:07:22	Test	Test	19	20	91	2067	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2067	745	711.4307828
01/24/2014	14:06:22	Test	Test	18	19	75	2085	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2085	763	728.6197145
01/24/2014	14:05:22	Test	Test	17	18	85	2072	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2072	750	716.205486
01/24/2014	14:04:22	Test	Test	16	17	97	2002	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2002	680	649.3596407
01/24/2014	14:03:22	Test	Test	15	16	93	2021	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2021	699	667.503513
01/24/2014	14:02:22	Test	Test	14	15	94	2080	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2080	758	723.8450112
01/24/2014	14:01:22	Test	Test	13	14	87	1969	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	1969	647	617.8465593
01/24/2014	14:00:22	Test	Test	12	13	92	2078	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2078	756	721.9351299
01/24/2014	13:59:22	Test	Test	11	12	90	1993	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	1993	671	640.7651748
01/24/2014	13:58:21	Test	Test	10	11	80	1984	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	1984	662	632.170709
01/24/2014	13:57:21	Test	Test	9	10	92	2039	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2039	717	684.6924447
01/24/2014	13:56:21	Test	Test	8	9	84	2022	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2022	700	668.4584536
01/24/2014	13:55:21	Test	Test	7	8	82	2007	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2007	685	654.1343439
01/24/2014	13:54:21	Test	Test	6	7	96	1961	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	1961	639	610.2070741
01/24/2014	13:53:21	Test	Test	5	6	96	2037	1 P					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2037	715	682.7825634
01/24/2014	13:52:21	Test	Test	5	5	107	2067	1 C1		Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2067	745	711.4307828
01/24/2014	13:51:21	Test	Test	4	4	82	2046	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2046	724	691.3770292
01/24/2014	13:50:21	Test	Test	3	3	93	2010	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2010	688	656.9991659
01/24/2014	13:49:21	Test	Test	2	2	93	2086	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2086	764	729.5746551
01/24/2014	13:48:21	Test	Test	1	1	90	2028	1 C					1 Min	Test	GC	S		1 400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	2028	706	674.1880975

	Alpha	Beta
average	90.17	2040.75
stdev	8.09	43.43
median	91	2038
max	108	2132
min	75	1961
DPM (average)	79.22	1948.80
DPM (max)	94.89	2035.93
DPM (min)	65.90	1872.64
BKG DPM	7.73	1262.4

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM	
02/05/2014	14:08:05	Test	Test	20		20	106	3346	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3346	2024	1932.799872
02/05/2014	14:07:05	Test	Test	19		19	87	3301	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3301	1979	1889.827542
02/05/2014	14:06:05	Test	Test	18		18	99	3283	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3283	1961	1872.638611
02/05/2014	14:05:05	Test	Test	17		17	98	3280	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3280	1958	1869.773789
02/05/2014	14:04:05	Test	Test	16		16	115	3292	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3292	1970	1881.233077
02/05/2014	14:03:05	Test	Test	15		15	114	3164	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3164	1842	1759.000674
02/05/2014	14:02:05	Test	Test	14		14	100	3300	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3300	1978	1888.872602
02/05/2014	14:01:04	Test	Test	13		13	112	3343	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3343	2021	1929.93505
02/05/2014	14:00:04	Test	Test	12		12	130	3196	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3196	1874	1789.558774
02/05/2014	13:59:04	Test	Test	11		11	120	3205	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3205	1883	1798.15324
02/05/2014	13:58:04	Test	Test	10		10	113	3387	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3387	2065	1971.952438
02/05/2014	13:57:04	Test	Test	9		9	103	3180	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3180	1858	1774.279724
02/05/2014	13:56:04	Test	Test	8		8	123	3340	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3340	2018	1927.070228
02/05/2014	13:55:04	Test	Test	7		7	106	3356	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3356	2034	1942.349278
02/05/2014	13:54:04	Test	Test	6		6	123	3233	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3233	1911	1824.891578
02/05/2014	13:53:04	Test	Test	5		5	115	3266	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3266	1944	1856.40462
02/05/2014	13:52:04	Test	Test	4		4	88	3268	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3268	1946	1858.314501
02/05/2014	13:51:04	Test	Test	3		3	120	3162	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3162	1840	1757.090792
02/05/2014	13:50:03	Test	Test	2		2	103	3204	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3204	1882	1797.1983
02/05/2014	13:49:03	Test	Test	1		1	106	3327	1C				1 Min	Test	GC	S		1400F1A	886	8.8	1322	0.5545	0.5102	0.25		8.21	3327	2005	1914.655999

	Alpha	Beta
average	109.05	3271.65
stdev	11.52	68.57
median	109	3281.5
max	130	3387
min	87	3162
DPM (average)	95.82	3124.23
DPM (max)	114.22	3234.38
DPM (min)	76.44	3019.52
BKG DPM	7.73	1262.431537

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt	Time	Bkg ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	13:18:45	Test	Test	11	20	334	3468	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3468	2146	2049.302631
02/05/2014	13:17:45	Test	Test	10	19	336	3454	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3454	2132	2035.933462
02/05/2014	13:16:45	Test	Test	10	18	343	3448	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3448	2126	2030.203818
02/05/2014	13:15:45	Test	Test	9	17	313	3393	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3393	2071	1977.682082
02/05/2014	13:14:45	Test	Test	9	16	319	3265	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3265	1943	1855.449679
02/05/2014	13:13:45	Test	Test	8	15	342	3510	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3510	2188	2089.410138
02/05/2014	13:12:44	Test	Test	8	14	319	3442	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3442	2120	2024.474174
02/05/2014	13:11:44	Test	Test	7	13	347	3398	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3398	2076	1982.456785
02/05/2014	13:10:44	Test	Test	7	12	300	3524	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3524	2202	2102.779307
02/05/2014	13:09:44	Test	Test	6	11	312	3403	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3403	2081	1987.231489
02/05/2014	13:08:44	Test	Test	6	10	361	3498	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3498	2176	2077.95085
02/05/2014	13:07:44	Test	Test	5	9	333	3467	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3467	2145	2048.34769
02/05/2014	13:06:44	Test	Test	5	8	385	3483	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3483	2161	2063.62674
02/05/2014	13:05:44	Test	Test	4	7	297	3418	1	C				1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3418	2096	2001.555598
02/05/2014	13:04:44	Test	Test	3	6	321	3407	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3407	2085	1991.051251
02/05/2014	13:03:44	Test	Test	3	5	316	3525	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3525	2203	2103.734248
02/05/2014	13:02:44	Test	Test	2	4	329	3455	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3455	2133	2036.888402
02/05/2014	12:59:43	Test	Test	2	3	320	3394	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3394	2072	1978.637023
02/05/2014	12:58:43	Test	Test	1	2	325	3434	1	P	Alpha pause reading exceeded limit. Investigation recommended.	Y		1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3434	2112	2016.834649
02/05/2014	12:57:43	Test	Test	1	1	322	3469	1	C1	Alpha limit exceeded. Alpha pause reading required.			1 Min	Test	GC	S		1	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3469	2147	2050.257571

Alpha	Beta
average	328.70
stdev	59.28
median	323.5
max	385
min	297
DPM (average)	288.81
DPM (max)	338.28
DPM (min)	260.96
BKG DPM	7.732
	1262.4

Appendix D.d

Logged Measurements

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Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
01/24/2014	14:20:38	Test	Test	101	101	4	35	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:20:34	Test	Test	100	100	0	38	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2280	958	914.8331408
01/24/2014	14:20:30	Test	Test	99	99	1	25	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1500	178	169.9794354
01/24/2014	14:20:25	Test	Test	98	98	4	32	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:20:21	Test	Test	97	97	0	32	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:20:17	Test	Test	96	96	1	30	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:20:13	Test	Test	95	95	2	30	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:20:10	Test	Test	94	94	0	24	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1440	118	112.6829965
01/24/2014	14:20:05	Test	Test	93	93	0	36	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2160	838	800.2402631
01/24/2014	14:20:01	Test	Test	92	92	1	28	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1680	358	341.868752
01/24/2014	14:19:57	Test	Test	91	91	0	38	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2280	958	914.8331408
01/24/2014	14:19:53	Test	Test	90	90	1	25	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1500	178	169.9794354
01/24/2014	14:19:49	Test	Test	89	89	2	31	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:19:44	Test	Test	88	88	4	31	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:19:40	Test	Test	87	87	2	40	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2400	1078	1029.426019
01/24/2014	14:19:36	Test	Test	86	86	2	27	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1620	298	284.5723131
01/24/2014	14:19:32	Test	Test	85	85	0	42	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2520	1198	1144.018896
01/24/2014	14:19:28	Test	Test	84	84	1	36	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2160	838	800.2402631
01/24/2014	14:19:23	Test	Test	83	83	0	32	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:19:19	Test	Test	82	82	3	31	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:19:15	Test	Test	81	81	2	32	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:19:11	Test	Test	80	80	1	37	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2220	898	857.536702
01/24/2014	14:19:07	Test	Test	79	79	2	33	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1980	658	628.3509464
01/24/2014	14:19:03	Test	Test	78	78	1	44	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2640	1318	1258.611774
01/24/2014	14:18:59	Test	Test	77	77	3	48	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2880	1558	1487.79753
01/24/2014	14:18:55	Test	Test	76	76	1	32	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:18:51	Test	Test	75	75	4	40	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2400	1078	1029.426019
01/24/2014	14:18:47	Test	Test	74	74	0	32	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:18:43	Test	Test	73	73	2	35	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:18:39	Test	Test	72	72	1	29	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.554						

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
01/24/2014	14:16:38	Test	Test	41		41	1	30	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:16:34	Test	Test	40		40	1	32	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:16:30	Test	Test	39		39	2	29	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1740	418	399.1651909
01/24/2014	14:16:27	Test	Test	38		38	0	35	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:16:23	Test	Test	37		37	0	29	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1740	418	399.1651909
01/24/2014	14:16:19	Test	Test	36		36	1	31	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:16:16	Test	Test	35		35	0	44	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2640	1318	1258.611774
01/24/2014	14:16:12	Test	Test	34		34	3	30	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:16:08	Test	Test	33		33	3	35	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:16:05	Test	Test	32		32	4	33	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1980	658	628.3509464
01/24/2014	14:16:01	Test	Test	31		31	1	37	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2220	898	857.536702
01/24/2014	14:15:58	Test	Test	30		30	1	37	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2220	898	857.536702
01/24/2014	14:15:54	Test	Test	29		29	1	35	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:15:50	Test	Test	28		28	0	40	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2400	1078	1029.426019
01/24/2014	14:15:47	Test	Test	27		27	2	35	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:15:43	Test	Test	26		26	2	38	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2280	958	914.8331408
01/24/2014	14:15:39	Test	Test	25		25	3	28	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1680	358	341.868752
01/24/2014	14:15:36	Test	Test	24		24	4	33	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1980	658	628.3509464
01/24/2014	14:15:32	Test	Test	23		23	1	40	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2400	1078	1029.426019
01/24/2014	14:15:28	Test	Test	22		22	1	31	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:15:25	Test	Test	21		21	0	40	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2400	1078	1029.426019
01/24/2014	14:15:21	Test	Test	20		20	1	26	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1560	238	227.2758742
01/24/2014	14:15:18	Test	Test	19		19	3	39	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2340	1018	972.1295797
01/24/2014	14:15:15	Test	Test	18		18	4	25	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1500	178	169.9794354
01/24/2014	14:15:11	Test	Test	17		17	0	36	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2160	838	800.2402631
01/24/2014	14:15:08	Test	Test	16		16	3	37	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2220	898	857.536702
01/24/2014	14:15:04	Test	Test	15		15	1	41	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2460	1138	1086.722457
01/24/2014	14:15:01	Test	Test	14		14	1	43	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2580	1258	1201.315335
01/24/2014	14:14:58	Test	Test	13		13	1	21	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1260	-62	-59.20632018
01/24/2014	14:14:54	Test	Test	12		12	2	38	1C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545						

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
01/24/2014	14:28:32	Test	Test	101	101	3	92	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2760	1438	1373.204652
01/24/2014	14:28:28	Test	Test	100	100	2	76	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2280	958	914.8331408
01/24/2014	14:28:24	Test	Test	99	99	2	79	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2370	1048	1000.777799
01/24/2014	14:28:20	Test	Test	98	98	2	67	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2010	688	656.9991659
01/24/2014	14:28:17	Test	Test	97	97	3	68	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:28:12	Test	Test	96	96	2	66	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1980	658	628.3509464
01/24/2014	14:28:08	Test	Test	95	95	0	66	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1980	658	628.3509464
01/24/2014	14:28:05	Test	Test	94	94	6	61	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1830	508	485.1098492
01/24/2014	14:28:01	Test	Test	93	93	1	62	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:27:57	Test	Test	92	92	3	70	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:27:53	Test	Test	91	91	1	63	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1890	568	542.4062881
01/24/2014	14:27:49	Test	Test	90	90	3	76	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2280	958	914.8331408
01/24/2014	14:27:45	Test	Test	89	89	5	62	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:27:41	Test	Test	88	88	4	73	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2190	868	828.8884825
01/24/2014	14:27:38	Test	Test	87	87	4	74	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2220	898	857.536702
01/24/2014	14:27:34	Test	Test	86	86	2	53	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1590	268	255.9240937
01/24/2014	14:27:30	Test	Test	85	85	1	75	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2250	928	886.1849214
01/24/2014	14:27:26	Test	Test	84	84	8	70	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:27:22	Test	Test	83	83	2	63	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1890	568	542.4062881
01/24/2014	14:27:19	Test	Test	82	82	2	71	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2130	808	771.5920436
01/24/2014	14:27:15	Test	Test	81	81	1	78	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2340	1018	972.1295797
01/24/2014	14:27:11	Test	Test	80	80	3	65	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1950	628	599.702727
01/24/2014	14:27:08	Test	Test	79	79	1	64	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:27:04	Test	Test	78	78	3	67	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2010	688	656.9991659
01/24/2014	14:27:00	Test	Test	77	77	6	69	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2070	748	714.2956047
01/24/2014	14:26:56	Test	Test	76	76	4	67	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2010	688	656.9991659
01/24/2014	14:26:52	Test	Test	75	75	1	68	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:26:49	Test	Test	74	74	3	72	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2160	838	800.2402631
01/24/2014	14:26:45	Test	Test	73	73	3	68	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:26:41	Test	Test	72	72	4	62	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545						

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
01/24/2014	14:24:50	Test	Test	41		41	5	63	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1890	568	542.4062881
01/24/2014	14:24:47	Test	Test	40		40	2	59	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1770	448	427.8134103
01/24/2014	14:24:44	Test	Test	39		39	4	49	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1470	148	141.3312159
01/24/2014	14:24:40	Test	Test	38		38	1	73	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2190	868	828.8884825
01/24/2014	14:24:37	Test	Test	37		37	0	68	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:24:34	Test	Test	36		36	3	61	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1830	508	485.1098492
01/24/2014	14:24:30	Test	Test	35		35	4	72	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2160	838	800.2402631
01/24/2014	14:24:27	Test	Test	34		34	1	63	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1890	568	542.4062881
01/24/2014	14:24:24	Test	Test	33		33	1	62	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:24:21	Test	Test	32		32	4	74	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2220	898	857.536702
01/24/2014	14:24:18	Test	Test	31		31	2	55	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1650	328	313.2205326
01/24/2014	14:24:15	Test	Test	30		30	2	53	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1590	268	255.9240937
01/24/2014	14:24:11	Test	Test	29		29	2	73	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2190	868	828.8884825
01/24/2014	14:24:08	Test	Test	28		28	2	67	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2010	688	656.9991659
01/24/2014	14:24:05	Test	Test	27		27	3	77	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2310	988	943.4813603
01/24/2014	14:24:02	Test	Test	26		26	1	68	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:23:59	Test	Test	25		25	4	69	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2070	748	714.2956047
01/24/2014	14:23:56	Test	Test	24		24	0	73	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2190	868	828.8884825
01/24/2014	14:23:53	Test	Test	23		23	3	59	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1770	448	427.8134103
01/24/2014	14:23:50	Test	Test	22		22	4	75	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2250	928	886.1849214
01/24/2014	14:23:47	Test	Test	21		21	1	68	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:23:44	Test	Test	20		20	5	70	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2100	778	742.9438242
01/24/2014	14:23:41	Test	Test	19		19	5	63	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1890	568	542.4062881
01/24/2014	14:23:38	Test	Test	18		18	6	78	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2340	1018	972.1295797
01/24/2014	14:23:34	Test	Test	17		17	4	67	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2010	688	656.9991659
01/24/2014	14:23:32	Test	Test	16		16	2	65	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1950	628	599.702727
01/24/2014	14:23:29	Test	Test	15		15	4	68	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:23:25	Test	Test	14		14	4	56	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1680	358	341.868752
01/24/2014	14:23:22	Test	Test	13		13	6	68	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:23:19	Test	Test	12		12	2	63	1C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.					

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
01/24/2014	14:36:17	Test	Test	101		101	1	88	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1760	438	418.2640038
01/24/2014	14:36:13	Test	Test	100		100	7	109	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2180	858	819.339076
01/24/2014	14:36:09	Test	Test	99		99	5	80	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1600	278	265.4735002
01/24/2014	14:36:06	Test	Test	98		98	4	101	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2020	698	666.5485723
01/24/2014	14:36:03	Test	Test	97		97	3	90	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:35:59	Test	Test	96		96	5	90	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:35:55	Test	Test	95		95	3	103	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2060	738	704.7461983
01/24/2014	14:35:51	Test	Test	94		94	6	116	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2320	998	953.0307668
01/24/2014	14:35:47	Test	Test	93		93	10	104	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2080	758	723.8450112
01/24/2014	14:35:44	Test	Test	92		92	8	113	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2260	938	895.7343279
01/24/2014	14:35:40	Test	Test	91		91	1	92	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1840	518	494.6592557
01/24/2014	14:35:36	Test	Test	90		90	7	99	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1980	658	628.3509464
01/24/2014	14:35:32	Test	Test	89		89	2	113	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2260	938	895.7343279
01/24/2014	14:35:28	Test	Test	88		88	6	87	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1740	418	399.1651909
01/24/2014	14:35:25	Test	Test	87		87	9	115	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2300	978	933.9319538
01/24/2014	14:35:21	Test	Test	86		86	4	95	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1900	578	551.9556946
01/24/2014	14:35:17	Test	Test	85		85	6	88	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1760	438	418.2640038
01/24/2014	14:35:14	Test	Test	84		84	8	116	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2320	998	953.0307668
01/24/2014	14:35:10	Test	Test	83		83	2	93	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:35:07	Test	Test	82		82	6	137	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2740	1418	1354.105839
01/24/2014	14:35:03	Test	Test	81		81	6	107	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2140	818	781.1414501
01/24/2014	14:35:00	Test	Test	80		80	4	106	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2120	798	762.0426371
01/24/2014	14:34:56	Test	Test	79		79	6	106	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2120	798	762.0426371
01/24/2014	14:34:52	Test	Test	78		78	2	109	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2180	858	819.339076
01/24/2014	14:34:48	Test	Test	77		77	6	100	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2000	678	647.4497594
01/24/2014	14:34:45	Test	Test	76		76	2	90	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:34:41	Test	Test	75		75	5	101	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2020	698	666.5485723
01/24/2014	14:34:37	Test	Test	74		74	2	100	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2000	678	647.4497594
01/24/2014	14:34:34	Test	Test	73		73	3	82	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1640	318	303.6711261
01/24/2014	14:34:30	Test	Test	72		72	5	89	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1780	458	437.3628168
01/24/2014	14:34:27	Test																										

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
01/24/2014	14:32:48	Test	Test	42		42	4	81	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1620	298	284.5723131
01/24/2014	14:32:46	Test	Test	41		41	5	89	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1780	458	437.3628168
01/24/2014	14:32:43	Test	Test	40		40	2	101	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2020	698	666.5485723
01/24/2014	14:32:39	Test	Test	39		39	6	100	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2000	678	647.4497594
01/24/2014	14:32:36	Test	Test	38		38	4	106	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2120	798	762.0426371
01/24/2014	14:32:34	Test	Test	37		37	6	109	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2180	858	819.339076
01/24/2014	14:32:30	Test	Test	36		36	5	95	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1900	578	551.9556946
01/24/2014	14:32:27	Test	Test	35		35	5	106	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2120	798	762.0426371
01/24/2014	14:32:24	Test	Test	34		34	8	88	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1760	438	418.2640038
01/24/2014	14:32:20	Test	Test	33		33	7	73	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1460	138	131.7818094
01/24/2014	14:32:17	Test	Test	32		32	2	103	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2060	738	704.7461983
01/24/2014	14:32:14	Test	Test	31		31	4	107	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2140	818	781.1414501
01/24/2014	14:32:11	Test	Test	30		30	7	75	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1500	178	169.9794354
01/24/2014	14:32:08	Test	Test	29		29	4	88	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1760	438	418.2640038
01/24/2014	14:32:05	Test	Test	28		28	2	113	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2260	938	895.7343279
01/24/2014	14:32:02	Test	Test	27		27	8	107	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2140	818	781.1414501
01/24/2014	14:31:58	Test	Test	26		26	6	111	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2220	898	857.536702
01/24/2014	14:31:55	Test	Test	25		25	9	113	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2260	938	895.7343279
01/24/2014	14:31:52	Test	Test	24		24	4	117	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2340	1018	972.1295797
01/24/2014	14:31:49	Test	Test	23		23	9	85	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1700	378	360.967565
01/24/2014	14:31:46	Test	Test	22		22	2	100	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2000	678	747.4497594
01/24/2014	14:31:43	Test	Test	21		21	4	92	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1840	518	494.6592557
01/24/2014	14:31:40	Test	Test	20		20	3	111	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2220	898	857.536702
01/24/2014	14:31:37	Test	Test	19		19	3	92	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1840	518	494.6592557
01/24/2014	14:31:34	Test	Test	18		18	5	102	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:31:31	Test	Test	17		17	5	104	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2080	758	723.8450112
01/24/2014	14:31:27	Test	Test	16		16	7	128	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2560	1238	1182.216522
01/24/2014	14:31:24	Test	Test	15		15	6	101	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2020	698	666.5485723
01/24/2014	14:31:21	Test	Test	14		14	8	92	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1840	518	494.6592557
01/24/2014	14:31:18	Test	Test	13		13	2	112	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2240	918	876.6355149
01/24/2014	14:31:15	Test	Test</td																									

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
01/24/2014	14:47:08	Test	Test	101		101	5	151	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2265	943	900.5090311
01/24/2014	14:47:04	Test	Test	100		100	3	113	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1695	373	356.1928617
01/24/2014	14:47:00	Test	Test	99		99	5	119	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1785	463	442.13752
01/24/2014	14:46:56	Test	Test	98		98	7	136	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:46:52	Test	Test	97		97	8	144	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2160	838	800.2402631
01/24/2014	14:46:48	Test	Test	96		96	6	141	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2115	793	757.2679339
01/24/2014	14:46:44	Test	Test	95		95	5	122	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1830	508	485.1098492
01/24/2014	14:46:40	Test	Test	94		94	7	128	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1920	598	571.0545075
01/24/2014	14:46:36	Test	Test	93		93	6	142	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2130	808	771.5920436
01/24/2014	14:46:31	Test	Test	92		92	7	145	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2175	853	814.5643728
01/24/2014	14:46:27	Test	Test	91		91	6	130	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1950	628	599.702727
01/24/2014	14:46:23	Test	Test	90		90	5	105	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1575	253	241.599984
01/24/2014	14:46:19	Test	Test	89		89	5	138	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2070	748	714.2956047
01/24/2014	14:46:15	Test	Test	88		88	5	135	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2025	703	671.3232756
01/24/2014	14:46:11	Test	Test	87		87	4	124	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:46:07	Test	Test	86		86	13	136	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2040	718	685.6473853
01/24/2014	14:46:03	Test	Test	85		85	5	111	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1665	343	327.5446423
01/24/2014	14:45:59	Test	Test	84		84	8	146	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2190	868	828.8884825
01/24/2014	14:45:55	Test	Test	83		83	8	142	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2130	808	771.5920436
01/24/2014	14:45:50	Test	Test	82		82	5	130	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1950	628	599.702727
01/24/2014	14:45:46	Test	Test	81		81	2	175	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2625	1303	1244.287664
01/24/2014	14:45:42	Test	Test	80		80	4	142	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2130	808	771.5920436
01/24/2014	14:45:38	Test	Test	79		79	7	130	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1950	628	599.702727
01/24/2014	14:45:34	Test	Test	78		78	6	144	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2160	838	800.2402631
01/24/2014	14:45:30	Test	Test	77		77	5	122	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1830	508	485.1098492
01/24/2014	14:45:26	Test	Test	76		76	6	151	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2265	943	900.5090311
01/24/2014	14:45:22	Test	Test	75		75	2	122	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1830	508	485.1098492
01/24/2014	14:45:18	Test	Test	74		74	5	125	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1875	553	528.0821784
01/24/2014	14:45:14	Test	Test	73		73	3	137	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2055	733	699.971495
01/24/2014	14:45:09	Test	Test	72		72	8	168	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886									

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
01/24/2014	14:43:06	Test	Test	42		42	6	120	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:43:02	Test	Test	41		41	1	126	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1890	568	542.4062881
01/24/2014	14:42:58	Test	Test	40		40	8	142	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2130	808	771.5920436
01/24/2014	14:42:54	Test	Test	39		39	5	132	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1980	658	628.3509464
01/24/2014	14:42:50	Test	Test	38		38	7	127	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1905	583	556.7303978
01/24/2014	14:42:46	Test	Test	37		37	6	120	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1800	478	456.4616298
01/24/2014	14:42:42	Test	Test	36		36	6	145	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2175	853	814.5643728
01/24/2014	14:42:38	Test	Test	35		35	5	127	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1905	583	556.7303978
01/24/2014	14:42:34	Test	Test	34		34	2	107	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1605	283	270.2482034
01/24/2014	14:42:30	Test	Test	33		33	9	122	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1830	508	485.1098492
01/24/2014	14:42:25	Test	Test	32		32	7	129	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1935	613	585.3786173
01/24/2014	14:42:21	Test	Test	31		31	6	157	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2355	1033	986.4536894
01/24/2014	14:42:17	Test	Test	30		30	2	115	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1725	403	384.8410812
01/24/2014	14:42:13	Test	Test	29		29	5	150	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2250	928	886.1849214
01/24/2014	14:42:09	Test	Test	28		28	5	135	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2025	703	671.3232756
01/24/2014	14:42:05	Test	Test	27		27	5	134	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2010	688	656.9991659
01/24/2014	14:42:01	Test	Test	26		26	8	147	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2205	883	843.2125922
01/24/2014	14:41:57	Test	Test	25		25	5	143	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2145	823	785.9161533
01/24/2014	14:41:53	Test	Test	24		24	7	118	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1770	448	427.8134103
01/24/2014	14:41:49	Test	Test	23		23	4	131	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1965	643	614.0268367
01/24/2014	14:41:44	Test	Test	22		22	9	130	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1950	628	599.702727
01/24/2014	14:41:40	Test	Test	21		21	7	114	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1710	388	370.5169714
01/24/2014	14:41:36	Test	Test	20		20	5	141	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2115	793	757.2679339
01/24/2014	14:41:32	Test	Test	19		19	2	124	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	1860	538	513.7580687
01/24/2014	14:41:24	Test	Test	18		18	9	143	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2145	823	785.9161533
01/24/2014	14:41:20	Test	Test	17		17	6	138	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2070	748	714.2956047
01/24/2014	14:41:16	Test	Test	16		16	8	139	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2085	763	728.6197145
01/24/2014	14:41:12	Test	Test	15		15	5	138	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2070	748	714.2956047
01/24/2014	14:41:08	Test	Test	14		14	7	145	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2175	853	814.5643728
01/24/2014	14:41:03	Test	Test	13		13	6	124	1 C				4 Sec	Test	GC	S	6.67E-02	400F1A	886									

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	14:17:10	Test	Test	100	100	1	62	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3720	2398	2289.947674
02/05/2014	14:17:06	Test	Test	99	99	2	44	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2640	1318	1258.611774
02/05/2014	14:17:02	Test	Test	98	98	2	42	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2520	1198	1144.018896
02/05/2014	14:16:58	Test	Test	97	97	2	44	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2640	1318	1258.611774
02/05/2014	14:16:54	Test	Test	96	96	3	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	14:16:50	Test	Test	95	95	0	61	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	14:16:46	Test	Test	94	94	2	54	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	14:16:42	Test	Test	93	93	2	49	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2940	1618	1545.093969
02/05/2014	14:16:38	Test	Test	92	92	2	53	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	14:16:34	Test	Test	91	91	1	55	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:16:30	Test	Test	90	90	1	39	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2340	1018	972.1295797
02/05/2014	14:16:26	Test	Test	89	89	0	46	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2760	1438	1373.204652
02/05/2014	14:16:22	Test	Test	88	88	2	53	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	14:16:18	Test	Test	87	87	1	61	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	14:16:14	Test	Test	86	86	1	62	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3720	2398	2289.947674
02/05/2014	14:16:10	Test	Test	85	85	0	55	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:16:06	Test	Test	84	84	2	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	14:16:02	Test	Test	83	83	1	55	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:15:58	Test	Test	82	82	3	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	14:15:54	Test	Test	81	81	1	56	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	14:15:50	Test	Test	80	80	2	39	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2340	1018	972.1295797
02/05/2014	14:15:46	Test	Test	79	79	1	42	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2520	1198	1144.018896
02/05/2014	14:15:42	Test	Test	78	78	1	47	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2820	1498	1430.501091
02/05/2014	14:15:39	Test	Test	77	77	0	56	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	14:15:35	Test	Test	76	76	1	41	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2460	1138	1086.722457
02/05/2014	14:15:31	Test	Test	75	75	1	64	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	14:15:27	Test	Test	74	74	1	51	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	14:15:24	Test	Test	73	73	1	48	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2880	1558	1487.79753
02/05/2014	14:15:20	Test	Test	72	72	2	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	14:15:16	Test	Test	71	71	6	53	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886									

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	14:13:31	Test	Test	42	42	4	57	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:13:28	Test	Test	41	41	2	59	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	14:13:25	Test	Test	40	40	6	44	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2640	1318	1258.611774
02/05/2014	14:13:21	Test	Test	39	39	2	57	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:13:18	Test	Test	38	38	0	59	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	14:13:14	Test	Test	37	37	1	48	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2880	1558	1487.79753
02/05/2014	14:13:11	Test	Test	36	36	2	56	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	14:13:07	Test	Test	35	35	2	55	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:13:04	Test	Test	34	34	0	57	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:13:01	Test	Test	33	33	2	65	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3900	2578	2461.836991
02/05/2014	14:12:58	Test	Test	32	32	3	59	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	14:12:54	Test	Test	31	31	0	54	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	14:12:51	Test	Test	30	30	1	46	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2760	1438	1373.204652
02/05/2014	14:12:48	Test	Test	29	29	1	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	14:12:44	Test	Test	28	28	1	73	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	4380	3058	2920.208502
02/05/2014	14:12:42	Test	Test	27	27	4	47	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2820	1498	1430.501091
02/05/2014	14:12:38	Test	Test	26	26	4	45	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2700	1378	1315.908213
02/05/2014	14:12:35	Test	Test	25	25	3	55	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:12:32	Test	Test	24	24	3	46	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2760	1438	1373.204652
02/05/2014	14:12:29	Test	Test	23	23	2	53	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	14:12:25	Test	Test	22	22	3	59	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	14:12:23	Test	Test	21	21	1	45	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2700	1378	1315.908213
02/05/2014	14:12:20	Test	Test	20	20	0	57	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:12:16	Test	Test	19	19	1	52	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3120	1798	1716.983285
02/05/2014	14:12:13	Test	Test	18	18	2	62	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3720	2398	2289.947674
02/05/2014	14:12:10	Test	Test	17	17	3	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	14:12:07	Test	Test	16	16	1	54	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	14:12:04	Test	Test	15	15	1	64	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	14:12:01	Test	Test	14	14	5	52	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3120	1798	1716.983285
02/05/2014	14:11:57	Test	Test	13	13	5	48	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8</								

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	14:24:02	Test	Test	100	100	3	100	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	14:23:58	Test	Test	99	99	7	104	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3120	1798	1716.983285
02/05/2014	14:23:54	Test	Test	98	98	1	99	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2970	1648	1573.742188
02/05/2014	14:23:50	Test	Test	97	97	5	117	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3510	2188	2089.410138
02/05/2014	14:23:46	Test	Test	96	96	3	107	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3210	1888	1802.927944
02/05/2014	14:23:42	Test	Test	95	95	4	105	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	14:23:38	Test	Test	94	94	1	104	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3120	1798	1716.983285
02/05/2014	14:23:34	Test	Test	93	93	7	125	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3750	2428	2318.595893
02/05/2014	14:23:30	Test	Test	92	92	6	127	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3810	2488	2375.892332
02/05/2014	14:23:26	Test	Test	91	91	5	102	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	14:23:22	Test	Test	90	90	3	97	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2910	1588	1516.445749
02/05/2014	14:23:18	Test	Test	89	89	4	127	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3810	2488	2375.892332
02/05/2014	14:23:14	Test	Test	88	88	5	107	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3210	1888	1802.927944
02/05/2014	14:23:10	Test	Test	87	87	4	117	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3510	2188	2089.410138
02/05/2014	14:23:06	Test	Test	86	86	3	98	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2940	1618	1545.093969
02/05/2014	14:23:02	Test	Test	85	85	1	121	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3630	2308	2204.003016
02/05/2014	14:22:58	Test	Test	84	84	5	105	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	14:22:55	Test	Test	83	83	6	104	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3120	1798	1716.983285
02/05/2014	14:22:51	Test	Test	82	82	7	114	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:22:47	Test	Test	81	81	4	112	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	14:22:43	Test	Test	80	80	4	134	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	4020	2698	2576.429868
02/05/2014	14:22:39	Test	Test	79	79	6	105	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	14:22:35	Test	Test	78	78	4	109	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3270	1948	1860.224382
02/05/2014	14:22:31	Test	Test	77	77	4	115	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3450	2128	2032.113699
02/05/2014	14:22:28	Test	Test	76	76	2	106	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	14:22:24	Test	Test	75	75	2	137	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	4110	2788	2662.374527
02/05/2014	14:22:20	Test	Test	74	74	6	102	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	14:22:16	Test	Test	73	73	4	102	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	14:22:13	Test	Test	72	72	1	107	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3210	1888	1802.927944
02/05/2014	14:22:09	Test	Test	71	71	4	96	1	C				2 Sec	Test	GC	S	3.33											

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	14:20:26	Test	Test	42	42	2	101	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3030	1708	1631.038627
02/05/2014	14:20:22	Test	Test	41	41	2	97	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2910	1588	1516.445749
02/05/2014	14:20:19	Test	Test	40	40	5	106	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	14:20:16	Test	Test	39	39	4	98	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2940	1618	1545.093969
02/05/2014	14:20:13	Test	Test	38	38	3	99	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2970	1648	1573.742188
02/05/2014	14:20:10	Test	Test	37	37	4	111	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	14:20:06	Test	Test	36	36	5	101	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3030	1708	1631.038627
02/05/2014	14:20:03	Test	Test	35	35	3	126	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	14:20:00	Test	Test	34	34	4	122	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	14:19:56	Test	Test	33	33	2	112	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	14:19:53	Test	Test	32	32	3	108	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	14:19:50	Test	Test	31	31	2	107	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3210	1888	1802.927944
02/05/2014	14:19:47	Test	Test	30	30	5	107	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3210	1888	1802.927944
02/05/2014	14:19:44	Test	Test	29	29	2	97	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2910	1588	1516.445749
02/05/2014	14:19:40	Test	Test	28	28	5	105	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	14:19:37	Test	Test	27	27	4	102	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	14:19:34	Test	Test	26	26	3	125	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3750	2428	2318.595893
02/05/2014	14:19:31	Test	Test	25	25	6	111	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	14:19:27	Test	Test	24	24	4	111	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	14:19:24	Test	Test	23	23	1	99	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2970	1648	1573.742188
02/05/2014	14:19:21	Test	Test	22	22	2	126	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	14:19:17	Test	Test	21	21	3	91	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2730	1408	1344.556432
02/05/2014	14:19:14	Test	Test	20	20	5	101	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3030	1708	1631.038627
02/05/2014	14:19:11	Test	Test	19	19	3	111	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	14:19:08	Test	Test	18	18	2	115	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3450	2128	2032.113699
02/05/2014	14:19:04	Test	Test	17	17	2	116	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	14:19:01	Test	Test	16	16	3	128	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	14:18:58	Test	Test	15	15	3	105	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	14:18:55	Test	Test	14	14	1	99	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2970	1648	1573.742188
02/05/2014	14:18:52	Test	Test	13	13	2	109	1	C				2 Sec	Test	GC	S	3.33E-02											

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	14:30:48	Test	Test	101		101	9	171	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:30:44	Test	Test	100		100	5	175	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3500	2178	2079.860731
02/05/2014	14:30:40	Test	Test	99		99	5	166	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3320	1998	1907.971415
02/05/2014	14:30:36	Test	Test	98		98	5	172	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3440	2118	2022.564293
02/05/2014	14:30:32	Test	Test	97		97	5	145	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2900	1578	1506.896343
02/05/2014	14:30:28	Test	Test	96		96	1	166	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3320	1998	1907.971415
02/05/2014	14:30:23	Test	Test	95		95	7	158	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3160	1838	1755.180911
02/05/2014	14:30:19	Test	Test	94		94	6	152	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3040	1718	1640.588033
02/05/2014	14:30:15	Test	Test	93		93	6	149	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2980	1658	1583.291594
02/05/2014	14:30:12	Test	Test	92		92	3	148	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2960	1638	1564.192782
02/05/2014	14:30:08	Test	Test	91		91	4	158	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3160	1838	1755.180911
02/05/2014	14:30:04	Test	Test	90		90	5	185	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3700	2378	2270.848861
02/05/2014	14:30:00	Test	Test	89		89	3	165	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:29:56	Test	Test	88		88	5	168	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	14:29:52	Test	Test	87		87	5	192	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	14:29:48	Test	Test	86		86	6	173	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3460	2138	2041.663106
02/05/2014	14:29:44	Test	Test	85		85	8	176	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3520	2198	2098.959544
02/05/2014	14:29:40	Test	Test	84		84	8	159	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	14:29:37	Test	Test	83		83	4	173	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3460	2138	2041.663106
02/05/2014	14:29:32	Test	Test	82		82	4	163	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3260	1938	1850.674976
02/05/2014	14:29:28	Test	Test	81		81	3	165	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:29:25	Test	Test	80		80	6	171	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:29:21	Test	Test	79		79	8	163	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3260	1938	1850.674976
02/05/2014	14:29:17	Test	Test	78		78	5	160	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3200	1878	1793.378537
02/05/2014	14:29:13	Test	Test	77		77	10	162	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	14:29:10	Test	Test	76		76	5	147	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2940	1618	1545.093969
02/05/2014	14:29:06	Test	Test	75		75	13	164	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3280	1958	1869.773789
02/05/2014	14:29:02	Test	Test	74		74	5	166	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3320	1998	1907.971415
02/05/2014	14:28:58	Test	Test	73		73	2	170	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3400	2078	1984.366667
02/05/2014	14:28:54	Test	Test	72		72	2	182	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3640	2318	2213.55242

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	14:27:08	Test	Test	42		42	5	167	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3340	2018	1927.070228
02/05/2014	14:27:05	Test	Test	41		41	8	167	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3340	2018	1927.070228
02/05/2014	14:27:01	Test	Test	40		40	6	166	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3320	1998	1907.971415
02/05/2014	14:26:58	Test	Test	39		39	4	169	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3380	2058	1965.267854
02/05/2014	14:26:54	Test	Test	38		38	6	133	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2660	1338	1277.710587
02/05/2014	14:26:51	Test	Test	37		37	7	161	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3220	1898	1812.47735
02/05/2014	14:26:48	Test	Test	36		36	5	171	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:26:44	Test	Test	35		35	4	152	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3040	1718	1640.588033
02/05/2014	14:26:41	Test	Test	34		34	3	167	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3340	2018	1927.070228
02/05/2014	14:26:37	Test	Test	33		33	3	179	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3580	2258	2156.255983
02/05/2014	14:26:34	Test	Test	32		32	7	159	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	14:26:31	Test	Test	31		31	4	165	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:26:27	Test	Test	30		30	5	167	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3340	2018	1927.070228
02/05/2014	14:26:24	Test	Test	29		29	1	203	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	4060	2738	2614.627494
02/05/2014	14:26:20	Test	Test	28		28	5	183	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	14:26:17	Test	Test	27		27	7	172	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3440	2118	2022.564293
02/05/2014	14:26:14	Test	Test	26		26	4	147	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2940	1618	1545.093969
02/05/2014	14:26:11	Test	Test	25		25	3	165	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:26:07	Test	Test	24		24	5	176	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3520	2198	2098.959544
02/05/2014	14:26:04	Test	Test	23		23	8	167	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3340	2018	1927.070228
02/05/2014	14:26:01	Test	Test	22		22	3	146	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2920	1598	1525.995156
02/05/2014	14:25:57	Test	Test	21		21	6	160	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3200	1878	1793.378537
02/05/2014	14:25:54	Test	Test	20		20	5	176	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3520	2198	2098.959544
02/05/2014	14:25:51	Test	Test	19		19	1	134	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2680	1358	1296.8094
02/05/2014	14:25:48	Test	Test	18		18	5	155	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3100	1778	1697.884472
02/05/2014	14:25:45	Test	Test	17		17	6	157	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3140	1818	1736.082098
02/05/2014	14:25:42	Test	Test	16		16	9	176	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3520	2198	2098.959544
02/05/2014	14:25:38	Test	Test	15		15	6	153	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	14:25:35	Test	Test	14		14	4	136	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2720	1398	1335.007026
02/05/2014	14:25:32	Test	Test	13		13	4	154	1 C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3080	1758	1678.785659

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	14:39:06	Test	Test	100	100	8	231	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3465	2143	2046.437809
02/05/2014	14:39:02	Test	Test	99	99	5	245	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3675	2353	2246.975345
02/05/2014	14:38:57	Test	Test	98	98	9	225	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3375	2053	1960.49315
02/05/2014	14:38:53	Test	Test	97	97	9	227	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3405	2083	1989.14137
02/05/2014	14:38:49	Test	Test	96	96	13	224	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	14:38:45	Test	Test	95	95	5	194	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2910	1588	1516.445749
02/05/2014	14:38:41	Test	Test	94	94	8	199	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2985	1663	1588.066298
02/05/2014	14:38:37	Test	Test	93	93	4	190	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2850	1528	1459.14931
02/05/2014	14:38:33	Test	Test	92	92	8	211	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3165	1843	1759.955614
02/05/2014	14:38:29	Test	Test	91	91	5	194	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2910	1588	1516.445749
02/05/2014	14:38:25	Test	Test	90	90	6	186	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2790	1468	1401.852871
02/05/2014	14:38:20	Test	Test	89	89	5	227	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3405	2083	1989.14137
02/05/2014	14:38:16	Test	Test	88	88	6	257	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3855	2533	2418.864662
02/05/2014	14:38:12	Test	Test	87	87	2	209	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3135	1813	1731.307395
02/05/2014	14:38:08	Test	Test	86	86	3	207	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3105	1783	1702.659175
02/05/2014	14:38:04	Test	Test	85	85	11	222	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	14:38:00	Test	Test	84	84	7	244	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	14:37:56	Test	Test	83	83	5	225	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3375	2053	1960.49315
02/05/2014	14:37:52	Test	Test	82	82	9	203	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3045	1723	1645.362737
02/05/2014	14:37:48	Test	Test	81	81	4	213	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3195	1873	1788.603834
02/05/2014	14:37:44	Test	Test	80	80	11	230	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3450	2128	2032.113699
02/05/2014	14:37:39	Test	Test	79	79	4	239	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3585	2263	2161.030687
02/05/2014	14:37:35	Test	Test	78	78	5	211	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3165	1843	1759.955614
02/05/2014	14:37:31	Test	Test	77	77	9	207	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3105	1783	1702.659175
02/05/2014	14:37:27	Test	Test	76	76	6	227	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3405	2083	1989.14137
02/05/2014	14:37:23	Test	Test	75	75	3	232	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	14:37:19	Test	Test	74	74	2	221	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3315	1993	1903.196712
02/05/2014	14:37:15	Test	Test	73	73	10	222	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	14:37:11	Test	Test	72	72	9	195	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2925	1603	1530.769859
02/05/2014	14:37:07	Test	Test	71	71	8	230	1	C				4 Sec	Test	GC	S	6											

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	14:35:08	Test	Test	42	42	8	239	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3585	2263	2161.030687
02/05/2014	14:35:04	Test	Test	41	41	6	192	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2880	1558	1487.79753
02/05/2014	14:35:00	Test	Test	40	40	8	216	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	14:34:55	Test	Test	39	39	6	221	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3315	1993	1903.196712
02/05/2014	14:34:51	Test	Test	38	38	5	225	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3375	2053	1960.49315
02/05/2014	14:34:47	Test	Test	37	37	3	230	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3450	2128	2032.113699
02/05/2014	14:34:43	Test	Test	36	36	4	220	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	14:34:39	Test	Test	35	35	10	234	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3510	2188	2089.410138
02/05/2014	14:34:35	Test	Test	34	34	4	206	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3090	1768	1688.335066
02/05/2014	14:34:31	Test	Test	33	33	8	201	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3015	1693	1616.714517
02/05/2014	14:34:27	Test	Test	32	32	3	221	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3315	1993	1903.196712
02/05/2014	14:34:23	Test	Test	31	31	11	246	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3690	2368	2261.299455
02/05/2014	14:34:19	Test	Test	30	30	14	190	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2850	1528	1459.14931
02/05/2014	14:34:14	Test	Test	29	29	13	210	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	14:34:10	Test	Test	28	28	6	232	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	14:34:06	Test	Test	27	27	6	191	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2865	1543	1473.47342
02/05/2014	14:34:02	Test	Test	26	26	6	205	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3075	1753	1674.010956
02/05/2014	14:33:58	Test	Test	25	25	10	229	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3435	2113	2017.789589
02/05/2014	14:33:54	Test	Test	24	24	8	228	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:33:50	Test	Test	23	23	5	208	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3120	1798	1716.983285
02/05/2014	14:33:46	Test	Test	22	22	6	210	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	14:33:42	Test	Test	21	21	15	204	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	14:33:38	Test	Test	20	20	5	218	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3270	1948	1860.224382
02/05/2014	14:33:33	Test	Test	19	19	6	226	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3390	2068	1974.81726
02/05/2014	14:33:29	Test	Test	18	18	7	237	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3555	2233	2132.382467
02/05/2014	14:33:25	Test	Test	17	17	6	205	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3075	1753	1674.010956
02/05/2014	14:33:21	Test	Test	16	16	7	228	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	14:33:17	Test	Test	15	15	8	222	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	14:33:13	Test	Test	14	14	4	218	1	C				4 Sec	Test	GC	S	6.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3270	1948	1860.224382
02/05/2014	14:33:09	Test	Test	13	13	9	228	1	C				4 Sec	Test	GC	S	6.											

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	12:34:24	Test	Test	101	101	5	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	12:34:20	Test	Test	100	100	6	56	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	12:34:16	Test	Test	99	99	6	62	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3720	2398	2289.947674
02/05/2014	12:34:12	Test	Test	98	98	14	64	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	12:34:08	Test	Test	97	97	5	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	12:34:04	Test	Test	96	96	2	60	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3600	2278	2175.354796
02/05/2014	12:34:00	Test	Test	95	95	6	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:33:56	Test	Test	94	94	6	54	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	12:33:52	Test	Test	93	93	5	63	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	12:33:48	Test	Test	92	92	6	66	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3960	2638	2519.13343
02/05/2014	12:33:44	Test	Test	91	91	3	61	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	12:33:40	Test	Test	90	90	6	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:33:36	Test	Test	89	89	6	51	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	12:33:32	Test	Test	88	88	3	48	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2880	1558	1487.79753
02/05/2014	12:33:28	Test	Test	87	87	8	75	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	4500	3178	3034.80138
02/05/2014	12:33:24	Test	Test	86	86	8	60	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3600	2278	2175.354796
02/05/2014	12:33:21	Test	Test	85	85	7	56	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	12:33:17	Test	Test	84	84	4	56	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	12:33:13	Test	Test	83	83	7	59	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	12:33:09	Test	Test	82	82	9	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:33:05	Test	Test	81	81	5	42	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2520	1198	1144.018896
02/05/2014	12:33:02	Test	Test	80	80	4	59	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	12:32:58	Test	Test	79	79	5	51	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	12:32:54	Test	Test	78	78	5	45	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2700	1378	1315.908213
02/05/2014	12:32:50	Test	Test	77	77	13	64	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	12:32:46	Test	Test	76	76	8	61	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	12:32:42	Test	Test	75	75	9	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	12:32:38	Test	Test	74	74	4	45	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2700	1378	1315.908213
02/05/2014	12:32:35	Test	Test	73	73	6	47	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2820	1498	1430.501091
02/05/2014	12:32:31	Test	Test	72	72	3	60	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886									

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	12:30:47	Test	Test	43	43	5	61	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	12:30:44	Test	Test	42	42	9	53	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	12:30:41	Test	Test	41	41	3	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:30:37	Test	Test	40	40	5	54	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	12:30:34	Test	Test	39	39	7	51	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	12:30:31	Test	Test	38	38	6	67	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	4020	2698	2576.429868
02/05/2014	12:30:27	Test	Test	37	37	3	56	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	12:30:24	Test	Test	36	36	5	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:30:21	Test	Test	35	35	8	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:30:18	Test	Test	34	34	5	58	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:30:14	Test	Test	33	33	5	64	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	12:30:11	Test	Test	32	32	4	63	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	12:30:08	Test	Test	31	31	4	64	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	12:30:05	Test	Test	30	30	3	59	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	12:30:01	Test	Test	29	29	2	46	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2760	1438	1373.204652
02/05/2014	12:29:58	Test	Test	28	28	8	62	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3720	2398	2289.947674
02/05/2014	12:29:54	Test	Test	27	27	5	54	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	12:29:51	Test	Test	26	26	5	63	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	12:29:48	Test	Test	25	25	5	60	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3600	2278	2175.354796
02/05/2014	12:29:45	Test	Test	24	24	7	47	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2820	1498	1430.501091
02/05/2014	12:29:42	Test	Test	23	23	2	55	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	12:29:39	Test	Test	22	22	5	62	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3720	2398	2289.947674
02/05/2014	12:29:36	Test	Test	21	21	4	64	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	12:29:33	Test	Test	20	20	6	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	12:29:30	Test	Test	19	19	7	50	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	12:29:27	Test	Test	18	18	2	55	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	12:29:24	Test	Test	17	17	5	52	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3120	1798	1716.983285
02/05/2014	12:29:21	Test	Test	16	16	8	44	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2640	1318	1258.611774
02/05/2014	12:29:18	Test	Test	15	15	5	57	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	12:29:15	Test	Test	14	14	4	53	1	C				1 Sec	Test	GC	S	1.67E-02	400F1A	886									

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	12:42:56	Test	Test	100	100	9	126	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	12:42:52	Test	Test	99	99	16	115	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3450	2128	2032.113699
02/05/2014	12:42:48	Test	Test	98	98	15	115	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3450	2128	2032.113699
02/05/2014	12:42:44	Test	Test	97	97	12	115	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3450	2128	2032.113699
02/05/2014	12:42:41	Test	Test	96	96	12	116	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:42:36	Test	Test	95	95	10	103	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3090	1768	1688.335066
02/05/2014	12:42:32	Test	Test	94	94	13	114	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	12:42:28	Test	Test	93	93	14	121	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3630	2308	2204.003016
02/05/2014	12:42:25	Test	Test	92	92	14	122	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	12:42:21	Test	Test	91	91	8	111	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	12:42:18	Test	Test	90	90	10	105	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	12:42:14	Test	Test	89	89	14	114	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	12:42:10	Test	Test	88	88	15	100	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3000	1678	1602.390407
02/05/2014	12:42:06	Test	Test	87	87	11	104	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3120	1798	1716.983285
02/05/2014	12:42:02	Test	Test	86	86	10	125	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3750	2428	2318.595893
02/05/2014	12:41:59	Test	Test	85	85	14	111	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3330	2008	1917.520821
02/05/2014	12:41:55	Test	Test	84	84	13	118	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	12:41:51	Test	Test	83	83	11	106	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	12:41:47	Test	Test	82	82	14	115	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3450	2128	2032.113699
02/05/2014	12:41:43	Test	Test	81	81	9	123	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3690	2368	2261.299455
02/05/2014	12:41:40	Test	Test	80	80	22	133	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3990	2668	2547.781649
02/05/2014	12:41:36	Test	Test	79	79	9	125	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3750	2428	2318.595893
02/05/2014	12:41:32	Test	Test	78	78	13	126	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	12:41:28	Test	Test	77	77	11	128	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	12:41:24	Test	Test	76	76	14	107	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3210	1888	1802.927944
02/05/2014	12:41:20	Test	Test	75	75	13	109	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3270	1948	1860.224382
02/05/2014	12:41:17	Test	Test	74	74	15	114	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	12:41:13	Test	Test	73	73	20	102	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	12:41:09	Test	Test	72	72	7	123	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3690	2368	2261.299455
02/05/2014	12:41:05	Test	Test	71	71	13	98	1	C				2															

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	12:39:24	Test	Test	42	42	13	99	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2970	1648	1573.742188
02/05/2014	12:39:21	Test	Test	41	41	11	130	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3900	2578	2461.836991
02/05/2014	12:39:17	Test	Test	40	40	11	124	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3720	2398	2289.947674
02/05/2014	12:39:14	Test	Test	39	39	14	128	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3840	2518	2404.540552
02/05/2014	12:39:11	Test	Test	38	38	10	120	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3600	2278	2175.354796
02/05/2014	12:39:07	Test	Test	37	37	10	105	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3150	1828	1745.631505
02/05/2014	12:39:03	Test	Test	36	36	6	114	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	12:39:01	Test	Test	35	35	10	122	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	12:38:57	Test	Test	34	34	7	98	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2940	1618	1545.093969
02/05/2014	12:38:54	Test	Test	33	33	7	108	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3240	1918	1831.576163
02/05/2014	12:38:50	Test	Test	32	32	11	119	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3570	2248	2146.706577
02/05/2014	12:38:47	Test	Test	31	31	11	113	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3390	2068	1974.81726
02/05/2014	12:38:44	Test	Test	30	30	14	116	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:38:41	Test	Test	29	29	10	124	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3720	2398	2289.947674
02/05/2014	12:38:38	Test	Test	28	28	13	130	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3900	2578	2461.836991
02/05/2014	12:38:35	Test	Test	27	27	8	114	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	12:38:31	Test	Test	26	26	11	123	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3690	2368	2261.299455
02/05/2014	12:38:28	Test	Test	25	25	17	113	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3390	2068	1974.81726
02/05/2014	12:38:25	Test	Test	24	24	14	122	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	12:38:22	Test	Test	23	23	16	109	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3270	1948	1860.224382
02/05/2014	12:38:19	Test	Test	22	22	6	97	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2910	1588	1516.445749
02/05/2014	12:38:15	Test	Test	21	21	9	118	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	12:38:12	Test	Test	20	20	8	112	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	12:38:09	Test	Test	19	19	13	119	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3570	2248	2146.706577
02/05/2014	12:38:06	Test	Test	18	18	13	113	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3390	2068	1974.81726
02/05/2014	12:38:03	Test	Test	17	17	5	114	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	12:38:00	Test	Test	16	16	12	126	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	12:37:57	Test	Test	15	15	17	114	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3420	2098	2003.46548
02/05/2014	12:37:54	Test	Test	14	14	7	120	1	C				2 Sec	Test	GC	S	3.33E-02	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3600	2278	2175.354796
02/05/2014	12:37:51	Test	Test	13	13	12	116	1	C				2 Sec	Test														

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	12:52:43	Test	Test	100	100	10	178	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3560	2238	2137.15717
02/05/2014	12:52:39	Test	Test	99	99	21	180	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3600	2278	2175.354796
02/05/2014	12:52:35	Test	Test	98	98	13	169	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3380	2058	1965.267854
02/05/2014	12:52:32	Test	Test	97	97	19	165	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	12:52:27	Test	Test	96	96	16	165	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	12:52:23	Test	Test	95	95	14	175	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3500	2178	2079.860731
02/05/2014	12:52:19	Test	Test	94	94	20	182	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3640	2318	2213.552422
02/05/2014	12:52:15	Test	Test	93	93	10	168	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3360	2038	1946.169041
02/05/2014	12:52:11	Test	Test	92	92	21	177	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	12:52:07	Test	Test	91	91	17	164	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3280	1958	1869.773789
02/05/2014	12:52:03	Test	Test	90	90	20	188	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3760	2438	2328.1453
02/05/2014	12:51:59	Test	Test	89	89	18	170	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3400	2078	1984.366667
02/05/2014	12:51:55	Test	Test	88	88	15	172	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3440	2118	2022.564293
02/05/2014	12:51:51	Test	Test	87	87	18	165	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3300	1978	1888.872602
02/05/2014	12:51:48	Test	Test	86	86	18	172	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3440	2118	2022.564293
02/05/2014	12:51:44	Test	Test	85	85	20	167	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3340	2018	1927.070228
02/05/2014	12:51:40	Test	Test	84	84	15	184	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3680	2358	2251.750048
02/05/2014	12:51:36	Test	Test	83	83	16	166	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3320	1998	1907.971415
02/05/2014	12:51:32	Test	Test	82	82	19	193	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3860	2538	2423.639365
02/05/2014	12:51:28	Test	Test	81	81	11	190	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3800	2478	2366.342926
02/05/2014	12:51:24	Test	Test	80	80	20	191	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3820	2498	2385.441739
02/05/2014	12:51:20	Test	Test	79	79	21	170	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3400	2078	1984.366667
02/05/2014	12:51:17	Test	Test	78	78	19	183	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3660	2338	2232.651235
02/05/2014	12:51:13	Test	Test	77	77	17	164	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3280	1958	1869.773789
02/05/2014	12:51:09	Test	Test	76	76	12	153	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	12:51:05	Test	Test	75	75	15	153	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	12:51:02	Test	Test	74	74	12	184	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3680	2358	2251.750048
02/05/2014	12:50:58	Test	Test	73	73	18	177	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3540	2218	2118.058357
02/05/2014	12:50:54	Test	Test	72	72	15	179	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3580	2258	2156.255983
02/05/2014	12:50:50	Test	Test	71	71	17	201	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	40		

Date	Time	Location	Lane	Sec #	Rdg #	Alpha	Beta	Inst #	C/P	Comments	Inv Rqd	Ignore Rdg	Bldg	SU	Tech	S/R	Cnt_Time	Bkg_ID	HPNS Inst Num	AlphaBKG	BetaBKG	AlphaEff	BetaEff	SurfEff	ActiveWindowArea	GrossBetaCPM	NetBetaCPM	NetBetaDPM
02/05/2014	12:49:07	Test	Test	42	42	15	206	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	4120	2798	2671.923933
02/05/2014	12:49:04	Test	Test	41	41	21	181	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3620	2298	2194.453609
02/05/2014	12:49:00	Test	Test	40	40	21	203	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	4060	2738	2614.627494
02/05/2014	12:48:56	Test	Test	39	39	16	166	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3320	1998	1907.971415
02/05/2014	12:48:53	Test	Test	38	38	13	187	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3740	2418	2309.046487
02/05/2014	12:48:50	Test	Test	37	37	16	158	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3160	1838	1755.180911
02/05/2014	12:48:46	Test	Test	36	36	16	144	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2880	1558	1487.79753
02/05/2014	12:48:43	Test	Test	35	35	20	153	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3060	1738	1659.686846
02/05/2014	12:48:39	Test	Test	34	34	11	189	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3780	2458	2347.244113
02/05/2014	12:48:36	Test	Test	33	33	14	180	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3600	2278	2175.354796
02/05/2014	12:48:33	Test	Test	32	32	21	175	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3500	2178	2079.860731
02/05/2014	12:48:29	Test	Test	31	31	14	185	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3700	2378	2270.848861
02/05/2014	12:48:27	Test	Test	30	30	19	159	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3180	1858	1774.279724
02/05/2014	12:48:23	Test	Test	29	29	16	169	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3380	2058	1965.267854
02/05/2014	12:48:20	Test	Test	28	28	10	175	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3500	2178	2079.860731
02/05/2014	12:48:17	Test	Test	27	27	13	167	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3340	2018	1927.070228
02/05/2014	12:48:14	Test	Test	26	26	15	158	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3160	1838	1755.180911
02/05/2014	12:48:11	Test	Test	25	25	17	174	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:48:08	Test	Test	24	24	12	198	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3960	2638	2519.13343
02/05/2014	12:48:05	Test	Test	23	23	18	172	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3440	2118	2022.564293
02/05/2014	12:48:02	Test	Test	22	22	16	178	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3560	2238	2137.15717
02/05/2014	12:47:59	Test	Test	21	21	14	148	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	2960	1638	1564.192782
02/05/2014	12:47:56	Test	Test	20	20	17	160	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3200	1878	1793.378537
02/05/2014	12:47:52	Test	Test	19	19	11	170	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3400	2078	1984.366667
02/05/2014	12:47:49	Test	Test	18	18	15	196	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3920	2598	2480.935804
02/05/2014	12:47:46	Test	Test	17	17	15	167	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3340	2018	1927.070228
02/05/2014	12:47:43	Test	Test	16	16	14	161	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3220	1898	1812.47735
02/05/2014	12:47:40	Test	Test	15	15	20	157	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3140	1818	1736.082098
02/05/2014	12:47:37	Test	Test	14	14	15	174	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3480	2158	2060.761918
02/05/2014	12:47:34	Test	Test	13	13	14	194	1	C				3 Sec	Test	GC	S	0.05	400F1A	886	8.8	1322	0.5545	0.5102	0.25	8.21	3880</		